SEP 30 1925 Medical Lib.

Medical Times

A Monthly Journal of Medicine, Surgery and the Collateral Sciences

Published by THE MEDICAL TIMES COMPANY at 95 Nassau Street

Vol. LIII, No. 10 NEW YORK, OCTOBER, 1925 Twenty-Five Cents a Copy Two Dollars a Year

CONTENTS

Electrotherapy Applied to the Prostate 237
VICTOR COX PEDERSEN, M.D., New York.

Clinical Anatomy of the Pelvic Bowel 241
CHARLES J. DRUECK, M.D., Chicago, Ill.

Observations in the Treament of Diabetes Mellitus 244
S. J. ESSENSON, M.D., New York.

An Ancient Fee and Medicine Bill..245
RICHARD WEBBER, New Rochelle, N. Y.

Gutta Percha Implantation With Trocar and Cannula.....246
CHARLES C. MILLER, M.D., Chicago, Ill.

Practical Points on Needles and Syringes for Local Anesthesia Technic 248
WINFIELD SCOTT PUGH, M.D., New York.

Lady Luck 249
VERLIN C. THOMAS, M.D., San Francisco, Cal.

Parenteral Protein Therapy in Abscesses of the Axilla.....251
S. OLEYNICK, M.D., Newark, N. J.

PUBLIC HEALTH 251

DIAGNOSIS & TREATMENT 255

EDITORIAL.
Jonathan Edwards, Vicarious Sadist..257

MISCELLANY.
"Spontaneous Combustion" 258

MEDICAL HAPPENINGS 262

CORRESPONDENCE 262

Established 1872 *Entered at the New York Post Office as Second Class Matter*

GASTRON

An aqueous-acid-glycerin extract of the entire mucosa of the fresh stomach, including the pyloric, containing the peptic enzymes—proteolytic and milk-curdling, the activated principles and naturally associated soluble organic and inorganic constituents.

Agreeable solution—no sugar, no alcohol.

Gastron is put up in 6 oz. unlettered bottles, without literature.

FAIRCHILD BROS. & FOSTER
NEW YORK

Remineralization

of the System, following infection or shock, is one of the fundamental axioms of therapeutics.

Compound Syrup of Hypophosphites "FELLOWS"

contains chemical foods in the form of mineral salts and dynamic synergists in an assimilable and palatable compound, and has established its reputation as the *Standard Tonic* for over half a century.

Samples and literature on request

FELLOWS MEDICAL MANUFACTURING CO., Inc.
26 Christopher Street - - - - - - - - New York City, U. S. A.

Facts
about Liquid Petrolatum

THIRTY-THREE different crude oils from as many leading producing fields in Russia, California and other parts of the world were refined last year at the Bayonne plant of the Standard Oil Co. (New Jersey).

This Company maintains and operates the largest merchant fleet flying the United States flag. Tankers transport crude oils to the Company's refineries from all points of the globe where oil is produced in commercial quantities.

From the selection of the crude materials to the last refining process and sealing of the bottle carton, the Standard Oil Co. (New Jersey) conducts every step in the production of Nujol. Thus we can insure the strictest maintenance of purity and quality.

In consideration of these facts, we think you will agree that the Standard Oil Co. (New Jersey) is particularly qualified to produce an intestinal lubricant second to none.

Viscosity specifications were determined only after exhaustive clinical tests in which the consistencies tried ranged from a water-like fluid to a jelly. The viscosity selected for Nujol we believe to be as closely adapted to human needs as can be achieved.

If ever a better liquid petrolatum is made, it will be found under the Nujol label. The name "Nujol" is a guarantee to the profession that the viscosity of the liquid petrolatum so labeled is physiologically correct at body temperature and in accord with the opinion of leading medical authorities.

Standard Oil Co. (New Jersey)

An Untried Friend Is Like an Uncracked Nut

Try ALKALOL upon any mucous membrane and the results will justify its claim to be a specific for irritation or inflammation of such tissue.

Eye discomforts due to wind, sun, or dust infections yield promptly to

ALKALOL

In the ear it is both harmless and helpful.

The summer cold with its provoking coryza yields promptly to ALKALOL.

The agony of cystitis is relieved by an injection of ALKALOL allowed to remain.

As a vaginal douche it freshens and cleanses.

On the skin it is soothing and healing.

Make a friend of ALKALOL, a friend who will serve in many ways, always dependable and safe.

Reason Why Literature and Sample on Request

THE ALKALOL CO. **Taunton, Mass.**

In Pancreatic Diabetes

PANCREOLS

(New Name for Insulols)

Suppositories No. 14

Supply the Active Principle of the Islands of Langerhans as contained in the Desiccated Pancreatic Hormone-bearing Substance Plus the Known Value of the Pancreas Content, Especially Prepared, Incorporated in a Base Absorbable by the Rectal Mucosa.

PANCREOLS ARE SAFE, PAINLESS, EFFICIENT

PANCREOLS
have many advantages over diabetic treatments that require hypodermic injection. They require no skill or technique; they are inexpensive; they act gradually without shock or danger; they do not result in toxic symptoms nor inconvenience; they are effective.

AURAZYME
Pulvoids No. 418
offer an efficient adjunct to Pancreols in the control of the nervous element frequently present in Diabetes. They contain the Bromides of Arsenic and Gold, combined with Enzymes, free from starch and cane sugar.

Pancreols: Per box of 12 suppositories $3.00
Aurazyme: Bottles of 100, per dozen bottles..... 12.00
Mailed free when order is accompanied by cash.

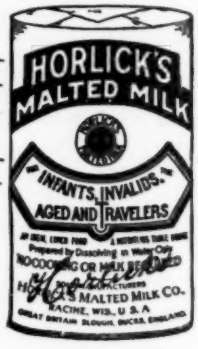
Originated and Manufactured Solely by

THE DRUG PRODUCTS CO., Inc.

No. 152 Meadow Street **Long Island City, New York**

NATRICO — SALVAROLS — PIT-REN — PANCREOLS — AURAZYME

THE ORIGINAL



AVOID IMITATIONS

For Infants, Growing Children

For Nursing Mothers

Prepared from clean, fresh, full-cream milk, combined with the extracts of malted barley and wheat. It is well balanced, partially predigested, and conveniently prepared.

"Horlick's" is readily adapted to individual infant feeding, nourishes and strengthens delicate children, and is used with benefit as a nourishing food-drink for nursing mothers. Prescribed by the medical profession over one-third of a century.

Samples and Literature Prepaid Upon Request

HORLICK'S MALTED MILK CO. Racine, Wis.

Medical Times

A Monthly Journal of Medicine, Surgery, and the Collateral Sciences

Vol. LIII, No. 10 | New York, October, 1925 | Twenty-Five Cents a Copy Two Dollars a Year

Board of Contributing Editors

WM. G. ANDERSON, M.Sc., M.D., DR.P.H....New Haven, Conn.
JOHN W. BOWLER, A.M., M.D.....Hanover, N. H.
HENRY CLARK COE, M.D., F.A.C.S.....New York
EDWARD E. CORNWALL, M.D., F.A.C.P.....Brooklyn, N. Y.
LIEUT. JOHN DUFF, JR., Medical Corps.....United States Navy
KENNON DUNHAM, M.D.....Cincinnati, O.
W. L. ESTES, M.D.....South Bethlehem, Pa.
HAROLD HAYS, A.M., M.D., F.A.C.S.....New York
WALTER J. HIGHMAN, M.D.....New York
HOWARD LILIENTHAL, M.D., F.A.C.S.....New York
EDWARD H. MARSH, M.D., DR.P.H.....Brooklyn, N. Y.
ROBERT T. MORRIS, A.M., M.D., F.A.C.S.....New York
HENRY T. MORTON, M.D., F.A.C.S.....Brooklyn, N. Y.
GEORGE THOMAS PALMER, M.D.....Springfield, Ill.
JOHN O. POLAK, M.Sc., M.D., F.A.C.S.....Brooklyn, N. Y.
JOHN PUNTON, A.M., M.D.....Kansas City, Mo.
CHARLES S. ROCKHILL, M.D.....Cincinnati, O.
DUNBAR ROY, M.D.....Atlanta, Ga.
ALBERT H. SHARPE, M.D.....Ithaca, N. Y.
JOHN P. SPRAGUE, M.D.....Chicago, Ill.
ALMUTH C. VANDIVER, B.S., LL.B.....New York
REYNOLD WEBB WILCOX, M.D. LL.D., D.C.L.....New York

Electrotherapy Applied to the Prostrate*

VICTOR COX PEDERSEN, A.M., M.D., F.A.C.S.

New York City

This paper was presented in preliminary or brief form as part of a Clinical Meeting of the New York Electrotherapeutic Society during the past winter. The special emphasis laid on the clinical and practical application of the lesions shown in the plaster casts attracted so much interest that it was decided to extend the paper to limits suitable for publication and to retain the plaster casts as the predominaing elements.

It is a source of satisfaction to the members of this association to realize that, after a generation of opposition and question concerning electrotherapeutic and allied measures of treatment, the profession at large is finally being convinced that all these methods have a real value which has been neglected deliberately and inexcusably. Medical schools are now organizing departments of physeotherapy and the American College of Surgeons has recently enunciated the principle that a hospital must possess such a department in order to receive the highest ranking. The American Medical Association has announced that a Council on Physical Therapy has been organized consisting of men of national reputation in the following fields: two physicists, two physiologists, two pathologists and four clinicians. Individual physicians interested in the field of physical therapy and societies or associations may apply to this Council for information and advice on any subject bearing on the general field of physical therapy. This Council will undoubtedly act as a protective medium against the false claims of manufacturers and likewise against the erroneous deductions of physicians in this field who have not at their disposal the means of checking up their own work.

In the field of journalism the American Medical Association through its Journal is now regularly abstracting papers from the official journal of our own association. This is also a great advance because it tends to keep those members of the profession informed who are as yet not definitely working in this field, but who may at any time wish to begin that work.

*Read Before The American Electrotherapeutic Association at its Annual Meeting in Chicago, Ill., September 15-18, 1925.

On the other hand it must be acknowledged that electrotherapy is not infallible. It is unreasonable claims which in the past have defeated their own ends by deservedly arousing suspicion instead of acceptance. The field of electrotherapy, though wide, is limited and the results are often inconsistent. Conditions which might promise good results fail to fulfill the promise and contrariwise unfavorable cases will frequently show complete cures. The basic facts are that modern apparatus is adapted to real progress. Therefore, if recognition of physical activities are known and proved and if diagnoses are exactly reached, the outcome will be a consensus of methods and opinions. What the author has already said before may be repeated once more, because although the principles are simple enough, they are often forgotten, perhaps in virtue of that simplicity. "There are a few basic principles which are altogether too often neglected. The patient must not be hurt or frightened; electrotherapy must be employed to augment all other measures and not necessarily to supplant any; the current must produce profound circulatory effect of creative character and it must be opposed to the circulatory condition of indolent character due to disease; the modalities must be varied influences and finally the electrotherapeutic measures must leave no evil aftereffects. If these principles are obeyed, little trouble will be met."

Prostatism in general is determined by the quality and degree of congestion, inflammation, abscess, hypertrophy, neoplasm or calculus present. In general the less organic the change and the more functional the disorder the greater the influence of electrotherapeutic measures. Surgery alone is of value in calculus and neoplasm and further in all the advanced forms of hypertrophy with secondary changes in the urine and bladder. Electrotherapy is of value in the anteoperative and postoperative management, but should never be relied on solely in these conditions. Otherwise and in general it is of great value in congestion, inflammation and abscess with proper selection of case and application of current.

Faradism

Faradism is very valuable in restoring atony of the bladder and sphincter after operation in the practice of modern urology. Twenty or thirty-minute applications of currents so mild that they do not weary the patient are always advisable. In considering faradism the following fundamentals must be carefully followed.

Currents according to demand are given by modern high tension coils. The source is the outer or secondary coil. Anesthetic effect is given by windings of fine wire, but for physical effect coarse wire is preferred. By the markings 1000, 2500 and 5000 is meant the number of feet used, according to the switch. Because of greater physical action, the preference is for 1000 feet. For convenience a weighted vibrator, timed to thirty oscillations a second to agree with muscle fibrillation is used. A switch or metronome creates interruptions, following the pulse-rate with its inflow and outflow of blood, thus avoiding spasm and exhaustion and augmenting metabolism. A large moist pad applied to the public zone and an insulated electrode in contact with the prostate are very serviceable. For beginners intraurethral instruments are not safe. Muscular contraction rather than mere sensation determines the strength of current. The duration of treatment is from fifteen to thirty minutes. Muscular tonicity, profound circulatory effect and relief of circulatory, glandular and tissue stasis and of muscular atony are the results from application on alternate days. Diathermy followed by static wave or the galvanic constant or interrupted sinusoidal current is the electrotherapeutic alternate.

Galvanism

Prostatism is benefited by interrupted galvanic current according to up-to-date urology. The nonoperative management of congestions and as an alternate or substitute for different modalities come first. Atony or injury of the sphincter and bladder wall during the postoperative period comes second. Thus the lead is followed of neurologists who apply galvanism in various grades of paralysis and muscular paresis.

In considering these indications, the following general principles are in mind. Galvanism is a continuous current. Its positive and negative polarity possess chemical and electrolytic influence. Nutrition or destruction of tissue is determined by strength and method of application. Generators are the most common source of current with the disadvantage of slight fluctuation. Batteries, though of high efficiency and of steady output with freedom from the variations of the generator current, have the disadvantage of decline in efficiency as the electric action between their elements exhausts the elements and the real difficulty of maintaining the cells in working order for full capacity.

The rheostat scale shows 0 to 20 and the milliamperemeter 0 to 70 graduations. The negative or relaxing pole is against the prostate in the rectum for acute lesions and the positive or stimulating pole for inert states, while a large moist pad is held on the pubic region with a sandbag. Acute disease indicates a current of 10 milliamperes while subacute and chronic states are aided by 20 to 70 milliamperes, beginning low and increasing without pain, but with sensation. The meter should never be outside the circuit. Weak currents applied not less than fifteen and usually not more than thirty minutes are advisable in contrast with stronger currents for a shorter time. The treatments are repeated every other day. The results depend on the proper selection of the stimulating acid positive pole or the sedative alkaline negative pole. The high vacuum glass electrode activated by the Oudin current or the negative pole of the high speed static machine is the electrotherapeutic alternate. Hydrotherapy (hot or cold) or phototherapy is a valuable aid between treatments for stimulation or sedation. Massage unless very carefully done and without unfavorable reaction may be omitted.

Ionization and Water Electrodes

Oedema and granulations indicating a relaxed prostate are benefited by mild ionization in the hands of the skillful urologist. The negative current is passed through a zinc urethral electrode insulated to the prostatic region in subacute lesions, but the positive pole is demanded for the stimulation of chronic states. It is said that the oxychloride of zinc is carried by the current into the tissues for 0.5 cm. A 3 milliampere current for five minutes is preferred. The machine must have a pole changing switch so that the adhesions forming on the positive pole may be released by the relaxation of the negative current for a minute or two and thus superficial damage will be avoided. Until all other methods have been well learned ionization had best be left alone.

Sinusoidalism

For the purposes of urology the sinusoidal galvanic current may be regarded as a regularly interrupted galvanic current, and has much the same indications. Again one observes the wisdom of having the sine wave correspond with the pulse rate, a prime factor or a multiple thereof, with preference for the slower rates.

The nature of the sinusoidal current must be comprehended. It is a slowly increasing and decreasing continuous galvanic current, reversed in polarity at the end of each cycle or wave. Its galvanic nature therefore alternates contraction and relaxation of both types of muscle fiber. The galvanic current may be used alone or combined with the faradic current for accentuation of the muscular influences. The faradic current may be used on the sinusoidal machine, but is then described as a surge-current because its polarity does not reverse in the strict sense. All the details need not here be repeated, therefore, as to rheostat, milliamperemeter, strength and duration of current, electrodes and their sites. The sinusoidal controller reads from 0 to 10. Sensation, contraction and meter reading must be properly correlated. The treatment persists from twenty to thirty minutes wihout fatigue and as usual on every other day.

As might be supposed the effects of the faradic and galvanic elements when combined in the sine wave duplicate those of the same current in simple form. But the galvanic current influences both unstriped and striped muscle while faradic contracts only striped fibres. As before heat and cold through hydrotherapy and phototherapy are adjuvants. Gentle finger massage only after expert experience is permissible.

Static Wave Current

This current has stood the test of investigation and development in application of nearly a generation. Unfortunately for final determination up to within a very short time there has been no good reports of cases, classification of cases, and cystoscopic description of the bladder and prostate before treatment and after treatment. These objections apply with equal force to the claims made for all other forms of electrotherapy in prostatic disease, but are rapidly being corrected by more accurate diagnoses and closer observation of results. As these important developments continue better and better results will surely ensue. The static wave can have no influence on true hypertrophy or new growth of the prostate, but it is of value for the congestion, relaxation and cedema of the prostate in all the functional disorders consequent upon hypertropic changes. Except per-

haps in very mild form indeed it is contraindicated in suppurative lesions of the gland.

A clear concept must be had as to the nature of this current, which has high voltage, initial low amperage and pulsatory influence. Speaking exactly, it is a unidirectional capacity discharge current with active, rapid electrophysical effect on the part. Contractions or their analogues occur in contractile tissue and cell protoplasm. The best machines consist of multiple plates driven by a motor, regulated with a multiple step-up rheostat and indicated as to output by a milliamperemeter. A metal insulated electrode against a prostate attached to the positive pole produces the contracting influence and a high vacuum glass electrode attached to the negative pole induces the atinic action. In each case the opposite pole must be grounded. The patient must not be disturbed by painful contractions or by undue heat. As far as possible from 60 to 120 interruptions to the minute are secured. The mentronome method of interrupting the current, elsewhere described by the author, is of supreme value and can hardly be dispensed with by anyone wishing to be really expert. Alternate days with twenty to thirty-minute sittings are the choice. The static wavé may alternate with the high vacuum glass tube diathermy and phototherapy. The heat of the last two are analagous. Hot and cold hydrotherapy and digital massage require careful observation as to results before systematic application. Digital massage is advisable when the acini of the prostate fill up and discharge periodically.

High Frequency Currents

The increase of healthful hyperaemia and nutrition, whensoever another form of current could be used and as a preliminary thereto is the indication of diathermia in modern urology. This is local diathermia. The promotion of absorption and elimination are secured by general diathermia or autocondensation when properly carried to the limit of perspiration.

Alternating or high frequency currents are identical terms and indicate rapidly oscillating currents which resistance overcome in the tissues develops into heat. Molecular activity, excited in living tissue is probably another factor in the heat production. Local and general diathermia are only comparative terms denoting these results in a definite part such as the prostate or in the body at large. The heating is vascular, nutritional and relaxing.

A standard transformer developing a high potential current energized by a motor-generator of not less than 2 kilowatts capacity is the apparatus. The portable machines exhibited and sold in stores only mislead the public and impose on the profession. A multiple spark-gap rheostat and a five-step switch are required, respectively regulating voltage and amperage. A hot-wire meter must be in the circuit reading from 0 to 2500 milliamperes. For prostatic work the high vacuum glass electrode is attached to the Oudin current, applied through the rectum or the urethra. Diathermia is delivered through a metal electrode of large size covering the prostate with a large pad over the pubes, or a large pad may be on the pubes and one half again as large may be under the buttocks, respectively for example, 40 and 60 square inches. If pads of equal size are used for this method the tendency is to overheat or even burn the sacral region on account of the resistance in the bones. Mild and not severe warmth is desired. Therefore, the milliampere readings should be from 200 to 1000 milliamperes within tolerance with preference for readings less than 500. Treatments last from ten to twenty minutes and are followed by another modality according to the indications thereof. Alternate days are the rule.

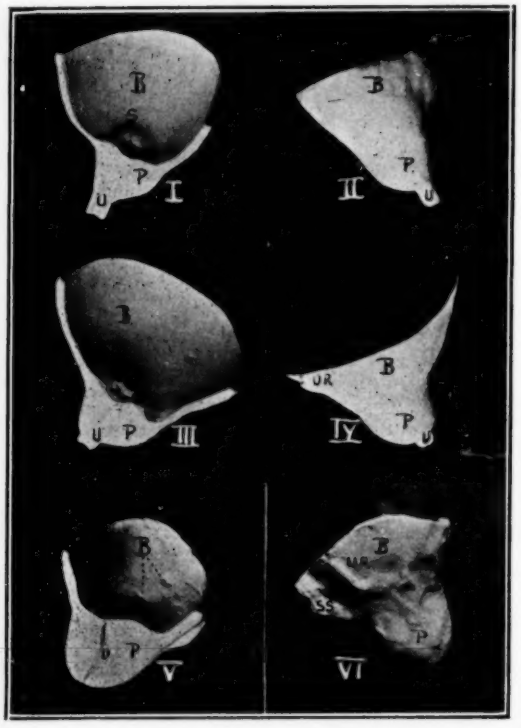
The X-Ray

The nature of the x-ray is so abstruse that volumes have been written on it without perhaps exactly explaining it. We are interested only in the urological indications as applied to the prostate. According to dose the x-ray is stimulating or inhibiting. The stimulating dose arouses the circulatory and cellular action, while the inhibiting dose causes tissue contraction and cell decline. Bleeding from the bladder or prostate may be controlled with the x-ray. The source may be a high speed static machine or a transformer. In a recent article Holzknecht[1] has shown that beyond much doubt ten years have been lost in the cause of x-ray therapy by the effort to develop a brief mass dose, of high voltage and relatively high amperage so that the tendency to burn the skin is great. This author further shows that the other type of current producing an x-ray of high voltage and low amperage without tendency to burn the skin is the current of choice. Elsewhere[2] the author has discussed the value of the static machine in the following terms: "The static machine seems to have the advantage of about 127,000 volts when the standard ball terminals (0.666 inch diameter) are 15 cm. apart, according to Harris and Reiss, both noted and independent investigators. Such voltage gives greater penetration than that from a transformer having greater amperage but lower voltage. X-ray treatment with the static machine for thirty minutes at 2 to 2.5 milliamperes, thus delivering seventy or seventy-five milliampere minutes may be more serviceable than treatment by a transformer delivering 10 milliamperes for two to two and a half minutes, in total 20 to 25 milliampere minutes under considerably lower voltage and lower penetration but higher burning powers. This comparison is probably correct, but is still under study. The x-ray tube vacuum should back up a five-inch spark gap betwen the ball terminals. This gap is equal to a ten-inch distance between the pointed terminals of the transformer machines. A transformer with standard ball terminals will deliver about the same voltage but the higher amperage is almost sure to burn the patient. Burns with the static machine are rare, when compared with remarkable results."

Diagnosis is placed last in this paper in order to correlate the following illustrations with that which has preceded and further in order to emphasize diagnostics as a real basis of deciding operative and non-operative treatment, electrotherapeutic and other physical measures. I am indebted to Doctor Charles H. Chetwood of New York for the gift of the following six plaster casts of prostatic conditions from the normal prostate and bladder in youth to the extreme limit of prostatic hypertrophy obstruction and herniation of the bladder. The casts are about half the normal size and the photographs one-quarter the normal size. The casts were placed on a box on the floor and the camera focussed without change of position for all the specimens, which are shown in the photographs at about the normal position of the bladder and prostate in the body.

[1] Prof. Guido Holzknecht, "The Present Status of Roentgen Rays in the Treatment of Carcinoma." Am. Jl. of Physical Therapy, March, 1925, p. 556-7.

[2] V. C. Pedersen, Electrotherapeutics in Urology, N. Y., Med. Jl. and Med. Rec., July 4, 1923.



INTERNAL AND EXTERNAL ASPECTS OF BLADDER AND PROSTATE

I-II, normal; III-IV, early hypertrophy with small retroprostatic depression; V-VI, later hypertrophy with tight stricture at the sphincter. The casts are placed as nearly as possible in the position of the bladder in the erect attitude.

The index letters are the same for all the specimens: B, bladder; S, sphincter; P, prostate; U, urethra; D, depression or retroprostatic pouch; UR, ureter; SS, seminal vesicle; M, middle lobe; H, herniations in the bladder wall.

Figures I and II are the normal bladder and prostate, showing the bladder as a spherical funnel with its outlet unobstructed and at the most dependent part. The external surface shows the prostate to be of considerable size, though normal.

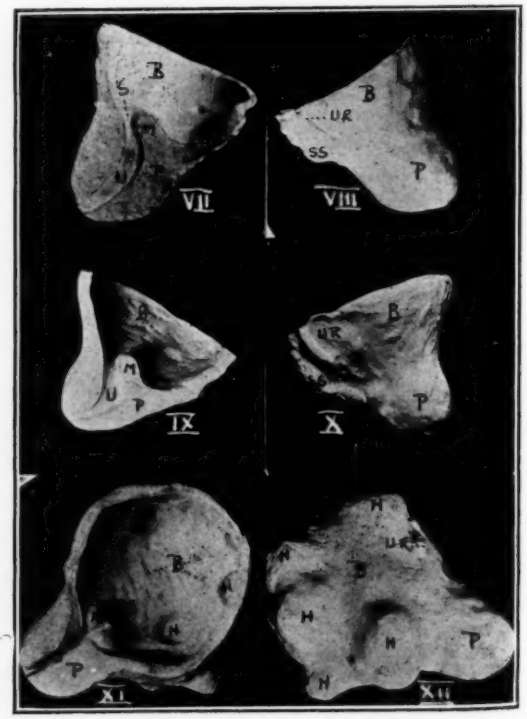
Figures III and IV show the earliest grade of prostatic enlargement of moderate but sufficient degree to pucker and obstruct the sphincter and to produce a small retroprostatic pouch, but not to produce changes in the muscle or mucous membrane of the bladder. These distinctions are recognizable solely through the cystoscope and must be known so as to record the results of treatment. The external surface shows the prostate hardly any larger than that of the normal prostate in figure II.

Figures V and VI show a later enlargement of the prostate with a higher obstruction at the sphincter a retroprostatic pouch and small incipient herniations indicated by the dotted lines from B. The high grade of obstruction and these changes in the bladder are determinable only with the cystoscope and absolutely contraindicate electrotherapy except as a temporary experiment to reduce the congestion and the tendency to hemorrhage anteoperatively and to restore the bladder and sphincter postoperatively. The external surface shows the prostate relatively not much larger than the specimen in Figure IV.

Figures VII and VIII contain a prostate much larger to the rectal touch with a peculiar predominance of the middle lobe, but without much change in the bladder wall showing that the obstruction to the outflow of the urine has not yet damaged the bladder materially. The retroprostatic pouch, however, is very deep, owing to the middle lobe so that the residual urine will be of large quantity and rapidly certain to decompose and become infected. Hence surgery alone is the one justifiable procedure and the decision rests on the use of the cystoscope. To neglect a completed diagnosis is professional injustice to the patient and to withhold operative relief until the bladder becomes infected is a professional impropriety toward the patient. Electrotherapy has no standing in a case like this and in cases like the following four figures, except to aid in the recovery of the bladder function after operation.

Figures IX and X. Here the prostate compared with the last two pictures is relatively less enlarged, but the obstruction is definitely greater, because the middle lobe protrudes high above the level of the prostate into the bladder, floats back and forth with the urinary stream, creates a deep retroprostatic pouch and obstructs the outflow so definitely that vast changes in the bladder wall are produced. Such obstruction demands immediate relief by surgical removal in order to save the bladder, the kidneys and the life of the patient. The external view of this speciment shows a prostate not very much larger than that in figure IV, proving that in these cases the rectal touch is most deceptive and that the cystoscope is the only instrument on which reliance may be placed.

The action of the middle lobe in Figures VII, VIII, IX and X is interesting from the standpoint of introducing the catheter. In the majority of these cases the urethra remains patent for the passage of a catheter for a long time and even after urination has



INTERNAL AND EXTERNAL ASPECTS OF BLADDER AND PROSTATE

VII-VIII, larger hypertrophy, prominence of midlobe; IX-X, smaller hypertrophy, greater prominence of midlobe; XI-XII, extreme obstruction with hermiations. Retroprostatic depressions and changes in bladder are significant in all. The casts are as nearly as possible in the position of bladder in the erect attitude.

become a dribble or a spatter with pain and strain. The mechanics are easy to explain. The catheter simply pushes the midlobe backward or sideward out of its path. Hence if the urethra is patent up to the midlobe the inexperienced physician will deny that any real obstruction exists. The passage of a large catheter is very dangerous because its pressure will traumatize the midlobe and cause it to become edematous and absolutely obstruct the bladder so that an emergency operation becomes necessary. The experienced hand can often decide how the midlobe has changed by the manner in which the catheter passes, but any and all observations must be checked up by the cystoscope, because although urethra may admit the catheter with little or no resistance the obstruction by the midlobe to the outflow may be so pronounced that the bladder is undergoing progressive severe changes which in the end mean death. Cystoscopy and only cystoscopy can detect, watch and measure such changes.

The writer had a case about a year ago exactly illustrating these principles. One of the prominent electrotherapeutists of New York City referred to him a patient with a midlobe prostate in the midst of acute obstruction and traumatism produced by repeated efforts to pass a catheter. After about five months of perfectly successful treatment in the author's hands the patient was referred back to the electrotherapeutist during a brief absence of the author from the city with the statement that the midlobe was slowly increasing the obstruction. This was determined by the skill and experience of the author in causing the catheter to pass the midlobe without traumatism. In the said five months the size of the catheter had had to be reduced. The electrotherapeutist succeeded in passing a fullsized catherer with the inevitable outcome of injuring the middle lobe, causing it to swell up suddenly and to induce the exact condition of an emergency operation for which the patient went home to a neighboring city. The operation was successful, but at the end of three or four weeks the patient died either of embolism or of heart disease of which he was a definite victim.

Figures XI and XII show prostatic and bladder changes very rarely encountered today except in patients from rural districts who through the defects of professional care are allowed to become practically or actually septic from such a bladder before relief is sought. The prostate is smaller than that in Figures VII and VIII but the middle lobe development and obstruction are the extreme, so that infection, trabeculation and herniation of the bladder are remarkable and peculiar. Patients with such lesions have dilated and infected ureters, renal pelves, destroyed kidneys and are otherwise the victims of chronic septic absorption and uremia.

It is somewhat difficult to understand why the retroprostatic pouch during even early hypertrophy accumulates relatively a large and progressive amounts of residual urine, and further why the symptoms of the patient are augmented at night. The photographs of the plaster casts are as stated as nearly as possible in the same position as the prostate and bladder occupy the body. It will be noted at once that the posterior lower quadrant of the bladder lying against the rectum is not only in the lowest part of the viscus in the standing position. but also is the portion in which the urine accumulates through the night more or less against the prostate gland as a dam. If now the prostate enlarges so that this pocket deepens and if it further begins to obstruct the urethra as distinctly shown in all of these plaster casts except, of course, the normal bladder and prostate in Figures I and II, all the underlying conditions and symptoms increase rapidly, especially when the patient lies down. The best manner in which to appreciate the hydraulics of this situation is for the reader to turn the plates to the right through 90 degrees so that the posterior lower quadrant of the bladder is the lowest portion of the plates. The observer will thereupon see that the level of the urethra as shown for example by the dotted line in Figue III leading from "S" into the urethra becomes the level of the urine at night. When this level is reached the patient necessarily has urgent desire to evacuate the bladder. If also obstruction of the urethra

(Concluded on page 262)

Clinical Anatomy of the Pelvic Bowel

CHARLES J. DRUECK, M.D.,

PROFESSOR OF RECTAL DISEASES, POST GRADUATE HOSPITAL AND MEDICAL SCHOOL,

Chicago, Ill.

The proctologist must be broadly trained, and the more broadly trained the better, as many of his problems of differential diagnosis touch on other departments of medicine. With a comprehensive knowledge of abdominal, pelvic and perineal anatomy and physiology he may exercise sound judgment regarding proposed treatment, and the following review of the pelvic bowel and its environs will assist in an intelligent conception of its disease, thus aiding in (1) establishing a diagnosis; (2) carrying out various steps of therapeutic or operative procedures; and later (3) in outlining post operative care. These studies are of prime importance and no one can succeed as therapeutist or surgeon without continual review of them.

The Perineum

Upon first examination of a patient for rectal or anal disease we inspect the perineum, a somewhat diamond shaped space, which corresponds to the outlet of the pelvis and is bounded in front by the public arch and the arcuate ligament of the pubes, behind by the tip of the coccyx, laterally by the inferior rami of the pubes and ischium. The physical boundaries are in front the scrotum, behind the buttocks, laterally the medial side of the thigh.

A line drawn transversely across in front of the ischial tuberosities divides the perineum into a posterior or rectal, and an anterior or unrogenital triangle. This line passes through the central pont of the perineum, which is situated about 2.5 cm in front of the center of the anal aperture, or in the male, midway between the anus and the reflection of the skin on the scrotum.

In the median line of the skin is the central rhaphe extending from the central rhaphe of the scrotum to the anterior margin of the anus.

In the middle line of the posterior part of the perineum and about 4 cm in front of the tip of the coccyx is the anal orifice. The junction of the mucous membrane of the anal canal with the skin of the perineum is marked by a white line which indicates also the line of contact of the external and internal sphincters.

Behind in the middle line is the tip of the coccyx. The margin of the gluteus maximum forms the posterolateral boundary, and in thin subjects, by pressing deeply, the socrotuberous ligament can be felt through the muscle. By continuing the palpation anteriorly the entire outline of the public arch can be readily traced forward from the ischial tuberosities.

Immediately beneath the perineal skin is the superficial fascia, continuous with the superficial fascia all over the body. It is very thick and areolar in texture and contains much fat in its meshes. It is not attached to the bones or muscles, but blends with the deep fascia at the various orifices. Beneath the subcutaneous fat is the superficial perineal fascia, or Colles's fascia, which is attached to the ischii laterally. As this fascia stretches across the anus it dips down toward the posterior border of the transversus perinei muscles, to be attached to the free border of the triangular ligament and become the deep perineal fascia and as a dense fibrous membrane stretches across the anterior portion of the pelvic floor.

The anal orifice in an oval aperture longitudinal when in repose and measures about one and one-half inches when it is quiescent but may be dilated to several times that size. It is situated equi-distant between the tuberosities of the ischii and about one inch anterior to the tip of the coccyx. In the female it is somewhat more anterior than in the male. The integument about the anus is slightly darker than the skin elsewhere and is thrown into radiating folds by the contraction of the corrugator cutis ani muscle. In this circumanal integument are many sweat glands, sebaceous and sudorriparous glands and certain hair follicles containing short, stiff hairs.

The conformation of the anal region varies considerably in different individuals. Usually when at rest the anus is in the bottom of the furrow between the nates and may be observed only by separating the buttocks. Occasionally the anus is so deeply placed or the nates so fat as to make examination and treatment of the parts difficult. In other subjects the anus may be in but a slight depression below the plane of the ischial tuberosities.

The corrugator cutis ani is a thin stratum of involuntary muscle which radiates from the anal orifice. Medially the fibers fade off into the submucous tissue, while laterally they blend with the true skin. By its contraction it raises the skin into ridges around the margin of the anus.

A finger inserted through the anal orifice enters the anal canal frequently spoken of as the anus. This is the terminal portion of the bowel and begins at about the tip of the coccyx, is directed downward and backward a distance of one and a half inches and ends at the anal orifice. Its upper limit is the linea dentata or semilunar valves which are at the lower limits of the crypts of Morgagni. The depressions in the mucosa between the columns of Morgagni are called the saccules of Horner.

When the anus is in repose, its lateral walls are in apposition, thus differing from the rectum whose anterior and posterior walls are opposed when the bowel is empty. The external sphincter surrounds the anus and closes its opening to a narrow anterioposterior slit. This muscle is also supported in the upper portion of the anal canal by the lower fibers of the internal sphincter and a few fibers of the levator ani muscle. The sphincters keep the lumen of the canal closed while the levator ani muscle holds it in its place in the pelvis. As the examining finger enters the anal canal it is grasped by the sphincter ani externus. This is a flat plane of muscular fibers, elliptical in shape and intimately adherent to the integument surrounding the margin of the anus. It measures 8 to 10 cm. in length from its anterior to its posterior extremity, and is about 2.5 cm. broad opposite the anus. It consists of two strata, superficial and deep.

The superficial is the main portion. It arises from a narrow tendinous band, the coccygeal raphe, which stretches from the tip of the coccyx to the posterior margin of the anus, it forms two flattened planes of muscular tissue, which encircle the anus and meet in front to be inserted into the central tendinous point of the perineum, joining with the transversus perinei superficialis, the levator ani, and the bulbocavernosus.

The deep portion forms a complete sphincter to the anal canal. Its fibers surround the canal, closely applied to the sphincter ani, internus, and in front blend with the other muscles at the central point of the perineum. In a considerable proportion of cases the fibers decussate in front of the anus, and are continuous with the transverse perinaei superficiales. Posteriorly, they are not attached to the coccyx, but are continuous with those of the opposite side behind the anal canal. The upper edge of the muscle is ill-defined since fibers are given off from it to join the levator ani.

A branch from the fourth sacral and twigs from the inferior hemorrhoidal branch of the pudendal supply the muscle.

The action of this muscle is peculiar.

1. It is, like other muscles, always in a state of tonic contraction, and having no antagonistic muscle, it keeps the anal canal and the orifice closed.

2. It can be put into a condition of greater contraction under the influence of the will, so as more firmly to occlude the anal aperture, in expiratory efforts unconnected with defecation.

3. Taking its fixed point at the coccyx, it helps to fix the central point of the perineum, so that the Bulbocavernosis may act from a fixed point.

Exploring at this level in front are found the urethral bulb and membranous part of the urethra in the male, the base of the triangular ligament, and then about 4 cm. above the anal orifice the prostate is felt; beyond the vesicular seminales, if enlarged, and the fundus of the bladder, when distended, can be recognized.

In the female, the posterior wall and fornix of the vagina, and the cervix and body of the uterus can be felt in front, while somewhat laterally the ovaries can just be reached.

On either side of the anal canal a pad of fatty tissue extends between the levator ani and the obturator internus into the ischiorectal space.

The deep fascia forms the lining of the ischiorectal fossa; it comprises the anal fascia, and the portion of the obturator fascia below the origin of the Levator Ani.

The ischiorectal fossa is somewhat prismatic in shape, with its base directed to the surface of the perineum, and its apex at the line of meeting of the obturator and anal fasciae. It is bounded in front by Colles fascia covering the Transversus perinaei superficialis and by the inferior fascia of the urogenital diaphragm, behind by the gluteus maximus and the sacro tuberous ligament, medially by the sphincter ani externus and the anal fascia, laterally by tuberosity of the ischium and the obturator fascia.

Crossing this space transversely are the inferior hemorroidal vessels and nerves; at the back are the perineal and perforating cutaneous branches of the pudendal plexus; while from the fore part the posterior scrotal (or labial) vessels and nerves emerge. The internal pudendal vessels and pudendal nerve lie in Alcock's canal on the lateral wall. The fossa is filled with fatty tissue across which numerous fibrous bands extend from side to side.

Posteriorly the examining finger within the anal canal feels the anococcygeal body, the pelvic surfaces of the coccyx and the lower end of the sacrum and the sacrospinous ligaments.

As the exploring finger advances it meets the sphincter ani internus, a muscular ring which surrounds the anal canal; its inferior border is in contact with, but quite separate from, the sphincter ani externus. It is about 5 mm. thick and is formed by an aggregation of the involuntary circular fibers of the intestines. Its lower border is about 6 mm. from the orifice of the anus.

Its action is entirely involuntary. It helps the sphincter ani externus to occlude the anal aperture and aids in the expulsion of the feces.

A little higher up may be encountered the resistance of the puborectalis and beyond this as the finger enters the rectum where the lowest of the transverse rectal folds may be palpated.

The rectum is continuous with the sigmoid colon and ends below in the anal canal. It is about 5 inches long, and rests in the hollow of the sacrum, from the level of the third sacral vertebra to a little below the tip of the coccyx and just behind the apex of the prostrate gland. At this point the bowel bends sharply backward and becomes the anal canal. At its upper end the rectum is narrower than the sigmoid, but toward its lower terminus it is dilated to form the rectal ampulla or pouch. Its greatest diameter is opopsite the prostate gland. The name is derived from the Latin meaning straight, but this is a misnomer.

Viewed from the front the rectum is seen to be regularly folded from side to side in a zigzag fashion, which results from the arrangement of the longitudinal muscle fibers. In addition to supporting the feces, these foldings greatly increase the capacity of the rectum without unduly dilating the tube.

These lateral sacculi may be greatly modified by disease. In atony of the rectum where the organ has been greatly distended, these dilations may be true diverticuli. In other cases where chronic rectitis has existed, the organ may be contracted to a narrow tube.

The anteroposterior curvatures are very marked; backward as the rectum lies in the hollow of the sacrum, forward as it follows the sacrococcygeal curve, and finally backward again at the anal canal. Knowledge of these curves is important when introducing the finger or instruments into the rectum. The curves vary in degree in different individuals, and may be greatly increased by tumors, a displaced uterus, or pelvic adhesion. When the rectum is empty its anterior and posterior walls appose and the rectum occupies only a small portion of the posterior division of the pelvic cavity in the median plane, and at each side, between it and the lateral wall of the pelvis, is a large fossa (the pararectal fossa), which, when the bowel is empty contains portions of the small intestine or the sigmoid. When the rectum is filled its circumference measures 5 to 10 inches, its lateral flexures become more marked, the gut passes out beneath the peritoneum, obliterating the pararectal fossa, and filling the greater part of the pelvis. Sometimes at the abrupt curve at the junction of the rectum with the anal canal, a knucke like projection presents immediately above the canal, as if the bowel were doubled back upon itself at this point. A distinct pouch may dip down in front. This more commonly occurs in multipara and is evidently due to a relaxed condition of the pelvic structures and the loss of support afforded by the perineal body to this part of the gut and to the great capacity and shallowness of the female pelvis.

At this junction of the sigmoid and rectum is an aggregation of circular fibers on the concave surface of the gut, which fibers spread out on the sides and convexity of the bowel and have been called the third sphincter. It is said that the contracture of these fibers will constrict the gut at this point. As these fibers encircle but a part of the lumen of the bowel and do not go entirely around they cannot be considered as a real sphincter.

At its extreme upper limit the rectum is completely encircled by the peritoneum which binds it closely to the hollow of the sacrum. This attachment is sometimes called the mesorectum.

The peritoneum covers the front and sides of the upper two-thirds of the rectum, lower down the peritoneum is attached only to the anterior wall of the rectum, and is finally reflected onto the seminal vesicals, forming the rectovesical pouch in the male, and on to the posterior wall of the uterus in the female, thus forming the cul-de-sac of Douglas. The lower portion of the rectum has no peritoneal covering. The greater part of the rectum lies behind or beneath the peritoneum. The level at which the peritoneum is reflected to the anterior viscus is of considerable surgical importance in excision of the rectum. This reflection is about 3 inches from the anus in the male and about 2¼ in the female, so that it is not desirable to remove more than 2 inches of the entire circumference of the bowel for fear of the risk of opening the peritoneum. When, however, the disease is confined to the posterior surface of the rectum, or extends farther in this direction, a greater amount of posterior wall of the gut may be removed, as the peritoneum does not extend on this surface to a lower level than 5 inches from the margin of the anus. If a more extensive operation is done, and the peritoneal cavity is necessarily opened, the opening is plugged with gauze until the operation is completed, and then the edges of the wound in the peritoneum are accurately approximated with sutures. In any rectal or peritoneal operation, anomalies of the cul-de-sac are to be anticipated. Tuttle reports a case where the peritoneal reflection was separated from the perineum by only the thickness of the external sphincter muscle.

The rectum is surrounded by a dense tube of the fascia endopelvina, which is fused posteriorly with the fascia of the sacrum and coccyx. This fascia surrounds the bowel like a net covers a gas balloon, and allows the viscus to distend.

In its upper portion the rectum is separated from the sacrum, and in the intervening space are the superior hemorrhoidal vessels, the left sacral plexus of nerves, and the left pyriformis muscle, lower down the rectum is firmly attached to the sacrum by dense fascia, but it is not in contact with the bone.

The Sigmoid Colon, sometimes called the sigmoid flexure or the pelvic colon, is the narrowest part of the colon, and is the continuation of the descending colon in the left iliac fossa. Commencing at the crest of the ilium, it forms a loop of variable length and position across the front of the false pelvis, and terminates in the rectum at the level of the third sacral vertebra. It is the most freely movable segment of the large bowel. It fills the left inguinal region, where it can be felt in thin persons with relaxed abdominal walls by rolling under the fingers when empty, and when distended, forming a distinct bulge. It varies in length, the average being about 16 inches.

The line of attachment of the mesosigmoid varies considerably in different individuals. It begins above, in front of the left psoas muscle, descends over the brim of the pelvis, crosses the promontory of the sacrum, then

(Concluded on page 259)

Observations in Treatment of Diabetes Mellitus.

S. J. Essenson, M.D.,

New York

In spite of the immense stride taken in the advance of medicine, physiological chemistry, etc., there are a few diseases which are almost just as obscure in tiology and therapy as in former ages.

Diabetes mellitus is one of the stubborn diseases, Senater said long ago. Diabetes must be characterized in general as an incurable disease, since complete and permanent recovery occurs exceptionally. This still holds good today. The earliest mention we find in literature of diabetes is in the work of Celsus. He treated it as a disease which causes an increase of urine, leading to emaciation and may end fatally.

Artaeus was the first one to give it the name of diabetes. It meant to him a transudation of the body liquids in the urine and he gives the seat of the disease as the stomach.

All the physiologists of antiquity and of the middle ages, among them Galen, held that diabetes was a disease of the kidneys. Until the middle of the seventeenth century there was no suspicion among medical men that the urine contained sugar. In 1674 Thomas Willis first discovered that there was sugar in the urine in cases described as stomach disease or kidney trouble. But it was not until a hundred years later that Dobson and Pole, Englishmen, showed undoubtedly that sugar could be found in some urine. Then it was recognized that diabetes mellitus is a special form of disease.

Great advances have been made at the end of the eighteenth century, when John Rallo, also an Englishman, showed that diet has a marked influence and diabetes then began to be looked upon as a metabolic disease. Finally in 1835, Ambrosian demonstrated with positiveness the presence of sugar in the blood. The disease became a greater mystery than before, as all former knowledge and conjectures were overthrown and autopsies gave a negative result in most cases. Mialhe advanced the hypothesis that the combustion of sugar can only take place in presence of free alkalies, and any disturbance in the circulation lessens the alkalinity in the blood and the result is liberation of sugar in the urine. By this theory he confirmed the importance of alkalies in diabetes. Between 1848 and 1854 the medical world was revolutionized by the experiment of Claude Bernard, who showed that glycogen is manufactured in the liver and converted in the system to sugar. He also produced diabetes artificially by puncturing the fourth ventricle and the medulla oblangata.

Since then diabetes mellitus has been investigated along scientific lines, but the etiology is still obscure. Heredity plays an important part as a predisposing cause in a great number of cases. We find in literature cases in which a whole family suffered. I have under my care several of such cases, especially one family of which the mother and the oldest son died in diabetic coma. A daughter has diabetes and a younger daughter died of diabetes not long ago. It seems that an occurrence of this sort is not so very rare.

It is also an unmistakable fact that there is a connection between diabetes and diseases of the nervous system, particularly epilepsy and mental affections. Diabetes mellitus occurs at every period of life, most commonly in middle age. Textbooks say that diabetes is more prevalent in men than women; but the experience of many writers has been the reverse. The time a woman reaches the menapause the ovarian function ceases. This induces a dysfunction of all of the ductless glands which predispose the woman to diabetes mellitus, as well as to other disorders, especially to obesity, which is more prevalent at the menapause period of life. This is admitted by many authorities as a predisposing cause of diabetes.

The pancreas which, under other circumstances, is not often the seat of morbid changes, is found diseased in diabetes mellitus. It is sometimes a fatty degeneration with a destruction of the gland cells and sometimes atrophied or both. It is usually in a state of productive inflammation. The parts usually affected are Islands of Langerhans. According to Kleb's views there is a coexistence of diabetes mellitus and the disease of the pancreas which depends upon lesions of the celiac plexus. Either the disease starts from the pancreas, encroaches upon the plexus and gives rise to diabetes by destroying its ganglia, or the celiac plexus is first affected and in consequence circulatory disturbances arise in the territory supplied by the celias artery, which lead to degeneration and atrophy of the pancreas.

The liver is the organ which has a glycogenic function, which consists in the constant formation of sugar out of the glycogen; this sugar being carried away by the blood of the hepatic vein. Senater states that out of twenty-seven autopsies the liver was found healthy in only six cases of diabetes. In thirteen it was more or less hyperemic, in three, enlarged and hardened; in four fatty degeneration, and in one case there was proliferation of connective tissue.

We can readily understand that there is in diabetes mellitus a primary focus of infection, ether in the gastro-intestinal tract, or in the blood, which interferes with the whole chain of the ductless glands. The pancreas, especially the Islands of Langerhans is part of the ductless gland system. The assimilation of sugar is also influenced by the activity of the posterior lobe of the pituitary body and the parathyroids.

According to the observation of Herzog and Opie, etc., there is a hyaline degeneration or atrophy, even absence of the Islands of Langerhans in diabetes mellitus. Then, what causes the traumatic condition of the pancreas and other ductless glands in diabetes?

It is a fact, as Dubinsky showed in 1892, that acids brought in contact with the mucuous membrane of the duodenum, act promptly on the secretion of the pancreatic juices. Incomplete oxidation of fat causes a certain quantity of B Oxybutiric acid, diacetic acid and acetone to form. These acids accumulating in the tissues abstract from and combine with the alkaline reserve of the lymph and blood. The constant production of these acids and the constant removal of the alkali reserves establish the condition known as ketosis, one of the forms of acidosis. The constant action of the bacilli coli communi may bring on this traumatic condition. Considering that the majority of patients of diabetes mellitus are at such an age that the function of the ductless glands are at an ebb and metabolism, especially Katabolism is below par, it is easy for certain bacteria in the intestine to become virulent.

Therefore, I came to the conclusion several years ago that a vaccine of the bacilli colli is indicated in diabetes mellitus. Since the time of the discovery of insulin, I employed the vaccine followed by insulin. Of course diet plays the prime importance. In patients in whom I employed insulin without the vaccine are never entirely

free from sugar, especially if they fail in their diet. Patients who got vaccine and insulin are free from blood sugar and in some only fractional percentage of sugar in the urine shows up and in milder cases those who get vaccine and some arsenical preparation and no insulin are practically sugar free.

Before the discovery of insulin I used a preparation of pancrea tin and posterior lobe of the pituitary intramuscularily, followed this by vaccine of bacilli colli, and suitable diet, with good results. In young children and young people who suffer with diabetes, insulin has a greater and more lasting effect than in elderly persons. But these patients should be under hospital care only.

Summary

1. The pancreas, especially the Islands of Langerhans, which are scattered through the organ, is the part which which is damaged in diabetes mellitus.
2. Bacilli colli communis and other intestinal bacteria are the ones which are responsible for the damage to the intestinal tract by their toxins. The alkaline reserve is exhausted and results in ketosis and acidosis.
3. Insulin is helpful in diabetes, but does not remove the cause, consequently regeneration of the Langerhans island cannot be expected.

Insulin has more effect on children and young adults who suffer with diabetes, probably because the chain of ductless glands has not been severed, and the influence of the pancreas as well as the post. Pituitary lobe secretions may be restored to some extent.

5. Diet must be always looked upon as an important factor.

AN ANCIENT FEE AND MEDICINE BILL

RICHARD WEBBER

CORRESPONDING SECRETARY, WESTCHESTER (N. Y.) HISTORICAL SOCIETY,

New Rochelle, N. Y.

A physician's fee and medicine bill over a century old hangs on the wall of the headquarters of the Huguenot and Historical Association of New Rochelle. The practitioner of today no doubt will smile at the "potions" and some of the medicines mentioned there, and he will probably have to glance into his dispensary to recall an item or two. The bill is none the less intersting because of that and maybe an added interest is given herby.

A copy of the bill is presentd her for those who may care to peruse:

FREDERICK SCHUREMAN

To DAVID ROGERS, JUR DR

1811			
May	25	To visit	4
		To six potions for worms & Castr Oil	6
	27	To visit	4
		To 10 Worm powders & 2 po Physic	12
		To 1 Strenghening Plaster	2
August	28	To visit Ol Ricini and L Lano	8
Sep.	18	To visit	4
		To 8 po for the ague and potion Physic for himself	8
		To 3 po Dovers powders & 2ʒ Fever mix for his Wife	5
		To ʒi Cort Peruvianm	4
	20	To visit to himself and Wife	4
		To ʒi Cort	4
		To 1 Pill opium & 1 po Dovers powders	2
		To 7 powders for the Ague	7
	27	To visit to himself & Wife	4
	24	To ʒi Cort & 2 po Dovers	6
		To visit to himself & Wife & Sundry Bitters and squils	10
1812			
May	10	To visit and sundrys for his son	8
	16	To visit & to his son Bark & R Dianthis	8
	19	To visit and sundrys	8
	22	To visit to his Wife and Bark	8
	25	To visit & ʒi Cort	8
June	12	To visit to his son & Cort Peru	8
		To 1 po Physic & Ric	2
July	2	To Bark	4
	26	To Bark & Bitters	6
	31	To visit to his Daughter Two po Physic & L Lano	8
Sep.	1	To visit	4
		To ʒ2 Bitters & Bark	6
		To Paregoric	2
		To ʒ4 Alkline mixture for the Fever	2
			£8 16

Received in full of the above

15th Aug. 1814 DAVID ROGERS, JUR

It will be noticed that the charges for visits and medicine are in shillings, and it wil be remembered that they were of "York" (or New York) values at 12½ cents to the shilling. It would appear that the doctor had renderd his bill at the end of fiften months, nevertheless he did not recive payment until two years after that.

Frederick Schureman, who with his family was under the physician's care, was a carpenter and builder and a man of some prominence in the old town of New Rochelle, N. Y. During the time covered by the bill and ceipt (1811-1814) he was one of the assessors of that place, a noverser of the roads, and an inspector of schools.

Dr. David Rogers, Jr., was at Mamaroneck, the adjoining town on the ast of New Rochelle, and practiced in the surrounding territory. Dr. Rogers was born at Greenfield Hill, Fairfield County, Conn., on May 15, 1773, the son and grandson of physicians—Drs. David Rogers (1748-1829) and Uriah Rogers (1710-1773). Among his brothers were Drs. William C. (1776-1824), Charles W. (1779-1849), and Morris M. (1788-1860). Dr. Rogers, Jr., settled in Mamaroneck, where about 1792 he married Esther Horton. He aided in founding the Medical Society of Westchester County (N. Y.) in 1797, and from 1817 to 1820 was president of the society. He had an office in New York City during his term as president and settled there permanently before the expiration of his term.

In Westchester County, at least, Dr. Rogers had a high reputation as an exterminator of worms, as one might surmise on reading his bill to Schureman. He treated all the verminous children in the region, it was said. He would not tell what special anthelmintics he employed. At a meeting of the Westchester medical society an inquiry was made of Dr. Rogers in this connection. He said that he used nothing unknown to the profession and that those present might know if they would consult the books in their libraries, whereupon one of the doctors said that he did not beieve Dr. Rogers fused any secrt remedy, that he probably gave nothing but pink (pinkroot; spigelia) and damnable doses of physic.

At the stated meeting in March, 1822, of the Medical Society of the County of New York, Dr. Rogers was admitted *ad eundem* "to all the rights and privileges of a member." He served one year (1824-25) as treasurer of the Society and another (1835-36) as president. Dr. Rogers died in New York City on May 19, 1841.

Two of Dr. Rogers' sons followed him in the profession—David L. (1799-1877) and James H. (1801-1851). The former was the first to practice in injuries of the large joints, the tying of the large arteries to prevent inflamamtion. He was vice-president of the Medical Society of the County of New York in 1831-32

Gutta Percha Implantation With Trocar and Cannula*

CHARLES C. MILLER, M.D.
Chicago, Ill.

In 1923, I reported the use of rubber and gutta percha for filling out defects in the tissues. At this time, I wrote an extensive monograph, and went into details regarding the many sources of rubber. I called attention to the peculiar characteristics of gutta percha, and recommended the use of the purified gutta subcutaneously.

Gutta is a material long used by dentists for taking impressions, and in many other ways. Among its uses is that of a root canal filler. It was the result of observing gutta percha used as root canal filling, that I conceived of its use subcutaneously, for in taking x-ray pictures of the teeth, I sometimes noticed bits of gutta percha which had been pushed through the root canal and which lay in the soft parts. The history of some cases showed that some of the gutta particles had probably been in such situation for many years. My experiments with implants indicated that pure gutta was very well tolerated when buried in the soft parts.

A great variety of foreign materials have been used as implants. The object is to secure one which will be well tolerated in the tissues. At the same time, it is highly desirable that such implants be easily fashioned and readily placed in the soft parts.

When I first suggested gutta percha as an implant material, I recommended that it be injected under the skin with a screw piston syringe. Since using it in that way, I have conceived of a plan of inserting the gutta in small particles through a cannula.

When one injects gutta percha through a needle, it is necessary that it be softened. The only effective way to soften it without the addition of other chemicals, is with heat. Gutta hardens at a temperature of 150° F.; when it cools enough to harden, it is impossible with the most powerful piston syringe to force it through the needle. As the result of this it is necessary to work with considerable expedition, and keep the material moving steadily through the needle in order to inject it by this technique.

As it is not necessary that the gutta be in one mass in most sites of implantation, it is possible to insert the gutta in small particles through a cannula. The cannula can be small enough to puncture the skin, leaving no subsequent scar, and as the gutta is in a cold and solid state, it is not necessary that the operator take any hasty steps. When the cannula has been inserted under the skin, the operator can, with all the deliberation which he desires, complete the operation.

The trocar and cannula is one of the oldest of surgical instruments. In featural surgery, I have been in the habit of using some of the rather small trocars. These I modified to the extent of making a wide slot in the cannula. About this slot is soldered a flange so that it is easy to drop particles of gutta percha into the lumen of the cannula.

To push the gutta particles along, it is necessary to have a small blunt ram which fits the lumen of the cannula. With this, the gutta percha particles are pushed through the cannula into the position selected by the operator.

Commercial gutta percha in the form of shavings, contains a great many impurities. If it is secured in this form from drug jobbers, it is necessary to dissolve the gutta and then precipitate it. When it is precipitated from a solution, it is possible to secure it in pure form. The dental supply houses contain a number of types of gutta percha, but the objection to most of them is that they contain other chemicals than the gutta. Some of them contain a great deal of zinc oxide, and coloring matter.

The nearest to the uncolored type of gutta which we can obtain from dental supply houses, comes in the form of very small spicules which are intended to be

Fig. 1.—Cannula and ram for inserting ground up gutta percha. A pointed trocar is inserted in the cannula and the instrument passed through the skin to the point where the gutta is to be deposited. The pointed trocar is then withdrawn and the insertion of gutta affected with the aid of a blunt ram which fits the lumen of the cannula.

inserted in the root canals. These are not expensive, and they may be gathered together and cut up into small particles with scissors. If the gutta percha is obtained in the form of sheets, either from the dental supply houses or from precipitation of solutions of gutta, it is possible to cut it up with coarse rasps.

Gutta percha in the form of sheets is so tough and resistent that it does not grind well in grinding machines, which I have tried. However, it does not take long to prepare a considerable amount of gutta from any of the different types which the operator may secure. After it has been ground, it may be sterilized either by chemical means or by boiling.

If the operator desires to boil it, it is merely necessary to confine it in a finger cot, or in a piece of muslin. After it has been boiled, it may be dried or it may be inserted in a damp state.

I sometimes allow the gutta particles to soak in solution of iodine, using ½ per cent iodine made soluble in a water solution by the addition of a small amount of iodide of potassium. When the gutta percha particles are taken from this solution, and pushed through the cannula into the tissues, they are not merely aseptic, but they contain an active antiseptic which does not materially harm the tissues.

One of the most valuable features of the simplified technique for implantation is the greater ease with which asepsis may be maintained during the operation. When open incisions are made and foreign bodies are implanted in the tissues, it is necessary to handle the implant much more in shaping and forming it to fit the tunnel formed by the operator, and at the same time through the open incision there is much greater danger of carrying in with the implant, an infection which may cause the operation to be a failure.

In the implantation of solid particles of bone, ivory, celluloid, horn, or cartilage, the difficulties of fitting the defect accurately are sometimes very great, so too even if a fit is obtained at the time of operation, it is not unusual to find that as healing occurs, the implant

* From an address delivered before The Muncie Academy of Medicine, Feb. 20, 1925.

which fitted at the time of operation, slipped just enough to spoil the effect.

We hear entirely too much said by surgeons about their success with implants. The impression the average surgeon conveys who uses this technique is that he secures wonderful and perfect results with all his implants. It is my experience that many patients come with implants which have been put in the face by some of our most experienced of surgeons. The history may be that at the time of operation, the implant fitted, and looked well, but that subsequently, a slight slip had caused the implant to show in an unnatural way.

It is only necessary that one margin of a solid mass implant show. Just a slight slip will spoil an implantation. Sometimes the fit of an implant is so bad, the condition after the implantation is worse than the condition which the operator intended to correct.

All foreign materials implanted in the tissues call upon the tissues for a certain amount of forbearance. In very rare cases, the body cells may be in such a state that they will not tolerate the most inert of insoluble foreign materials, but in nearly all cases where inert insoluble implants are not tolerated, it is due to fault in the technique and usually infection. Infections vary greatly in degree from suppuration, to merely a mild chronic congestive state. Of course, when pus forms, it will find its way to the surface through one channel or another. There can be though, a degree of infection, short of suppuration. In which case only a type of chronic irritation may show itself in the tissues immediately adjacent to the implant.

Whatever the implant, there will be set up by the body, a process aiming at the destruction of the foreign material. This process consists of the accumulation about the material of lymphocytes. These and the connective tissue cells themselves which form about the implant, are active agents, aiming at its destruction. It is the custom of operators to look upon connective tissue cells as encapsulating agents only. These cells do not merely encapsulate a foreign material, but at the same time they try to destroy it. When the lymphocytes and the connective tissue cells are unable to destroy a foreign material, and it is insoluble and resistent to their attack, a considerable connective tissue formation will occur, and what on gross inspection appears to be a dense capsule, will form. With an inert implant, this encapsulation progresses to a certain point, and here ceases. One will not suspect the degree of encapsulation by an examination of the part externally. Many foreign substances, resist for a considerable time, any effort of the connective tissue cells and the lymphocytes to destroy them but sooner or later succumb to this process. Gutta seems well able to resist it, and it is my observation of those patients who carry the pure gutta, that after a period of a few months, the changes in the tissues seem to have reached an end, and the implant remains very much the same.

When we insert the trocar and cannula, it is only necessary to anesthetize the point of insertion. It is not necessary to inject the cocain or novocain into the tissues at the site of the implantation; so too the trocar may be used to form a space in the tissues where the gutta percha is to be deposited. Should any hemorrhage occur through the cannula, it is easily possible to irrigate the cavity through the lumen of the cannula. It is my experience that such hemorrhages do not occur when the cannula is pressed into the cellular spaces underlying the skin of the face.

When a solid one piece implant is made through an open incision it is necessary to anesthetize not only the point of incision in the skin, but also the tissues through which the scalpel or dissector is passed in making the tunnel for the reception of the implant.

All injections into the skin at the site of implantation affect the normal relations of the tissues, and add to the difficulties of making a successful fit of the implant.

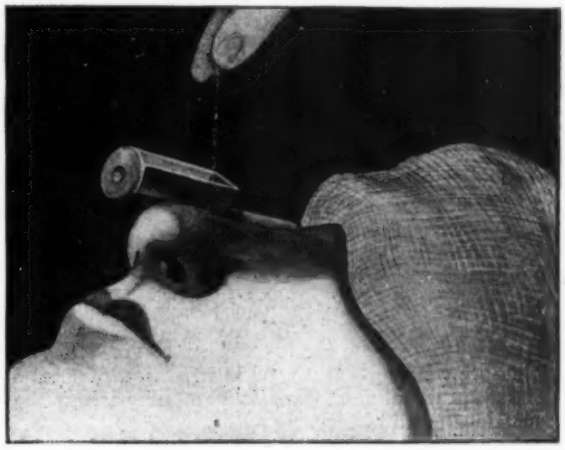


Fig. 2.—Manner of using cannula in raising the depressed nasal bridge. The ground gutta is not suitable for raising a very low nasal bridge, but as present demands are often for raising depressions of moderate degree the instrument may often be used advantageously.

These are all avoided by the use of the ground-up implant. In this connection I might say that for several years past I have used the cartilage of the rib in a ground-up state through cannulae, just as I have used gutta percha. I have also found the cannula a very useful instrument for inserting small particles of fat. While fat is not as well borne in the tissues, as is cartilage, and there is more likely to be an absorption of fatty tissues implanted in various parts of the body, at the same time fat is so much more easily obtained than the white hyaline cartilage that it often is used in place of the cartilage.

There are a large number of very small featural defects which patients are anxious to have overcome. Small pits may be easily filled out by the insertion of particles of fat under the depression. In filling out the smaller pits, one should use the smallest cannula obtainable. The very small trocar, and cannula, makes a very insignificant wound in the skin. At the same time, it gives one a very ready means of placing small particles of fat in the depression which it is desired to fill out. The excision of fat from the abdominal wall is of course a very simple procedure, and it is only necessary to inject the skin with a 1% or 2% solution of novocain, to make it possible to painlessly remove as much fat as is needed. This of course is readily cut up with scissors into either strips or small masses, which may be dropped into the cannula and pushed into the depression. Small fat masses seem to remain as long as the larger masses. In fact, it will be found that the fat masses after they have been in place a few days, are larger than they were at the time of insertion.

Operators frequently say that the fat grows, it does not grow. It becomes edematous. This is the effort of nature to remove it, but the cellular tissues tolerate fat quite well, and while the changes which occur for a few months succeeding its implantation are all the changes of degeneration, at the same time most fat implants seem to develop a resistance, and even though they show the degenerative changes for quite a while after they are deposited in the tissues, they seem finally to reach

(Concluded on page 262)

Practical Points on Needles and Syringes for Local Anesthesia Technic

WINFIELD SCOTT PUGH, M. D.,
New York

The introduction of asepsis and general anesthesia were, undoubtedly, the greatest achievements in the glorious history of medicine and surgery. By these developments a tremendous impetus was given to the activities of our progressive profession. A vast field for research was opened and the hitherto impossible was rendered easy of accomplishment. Undoubtedly, the factor of greatest importance in this connection was the reduction in operative mortality.

We shudder when we read of operations performed in the pre-aseptic and pre-anesthetic area, and rejoice over the marvels of the day. In spite of the success of general anasthesia in competent hands, it still has many disadvantages. These are too well known to dwell upon in this brief sketch. With the introduction of local anesthesia, practically all the dangers of narcosis have been relegated to history.

It is a most inspiring sight to visit many of the large clinics of Europe and note the great strides they have made in the art of local and regional anesthesia. In some institutions local has almost entirely supplanted general anesthesia. At other clinics its use has not extended quite this far but it is everywhere notably on the increase. In urological surgery its use is particularly emphasized by Illyes of Budapest, who rarely uses narcosis. In America, while it has not made such great headway, it is becoming more and more in vogue and I believe it is only a question of time when its employment here will be equal to that in Europe.

In an experience covering many years the writer has used local anesthesia in over three thousand cases in practically every part of the body. In the last few years we have been particularly interested in its use in urological surgery. In no other part of the anatomy is its value so strikingly apparent. The reduction in the operative mortality rate is little short of marvelous. No less striking is its use in the surgery of the thyroid gland. In several large series of cases, reported from various clinics, there were no operative mortalities. The writer has recently reported one hundred consecutive bladder operations without a single operative death. This is a real demonstration of the possibilities of regional technic.

Some of our observations regarding needles and syringes may be of value and we shall jot them down briefly.

In the successful conduction of local anesthesia, it is necessary to have a set of syringes and needles adapted to this type of work. Briefly, they should conform to the following postulates:

a. The syringe must not be too expensive.

b. The needles should be capable of easy attachment and removal, yet must not fly off or leak under heavy pressure.

c. Needle must be easily procurable in the different sizes and lengths, and must also be reasonable in price.

d. The needle, if of steel, should be properly annealed, be flexible and yet not easily breakable.

e. The needle should be procurable in other materials than steel—irridio-platinum, gold and nickeloid.

f. The syringe must have a comfortable finger rest and thumb rest or rings.

g. The plunger should not be capable of accidentally falling out or slipping forward.

h. Both syringe and needles should be readily boilable and all danger of breakage eliminated.

There are a number of syringes on the market which possess more or less the above requisites, such as the Labat, Vim, Meeker, Sherwood-Dunn, and others. The Luer Lok Control syringe possesses practically all of the necessary features noted above and in addition, the Luer type needles in all sizes are available in every instrument and most drug stores.

The large comfortable finger and thumb rings of the Luer Lok syringe give a firm grip, in addition to which it is readily manipulated and will not fall out of one's hand. This is a rather important point as in producing local anesthesia the fluid must be kept flowing constantly in order not to inflict pain. It is also necessary at times to move the syringe rather rapidly from one position to another. It must be remembered, however, that it is imperative that novocain and other solutions for local anesthesia must be injected in a steady but slow stream.

The non-corrosive friction of the Luer Lok syringe prevents the falling out or slipping forward of the piston, so common in most syringes. Its instant withdrawal or reinsertion is not prevented, however. This is particularly of value where novocain is poured into the barrel.

We are constantly receiving inquiries as to the proper gauges and lengths of needles to be used in the various procedures in local anesthesia. The following table, we hope, will prove a useful guide:

Operation	Gauge	Lengths
For raising the wheal	24	¾"
For injection in the wrist, ankle, scalp, finger and toe	22	1½" & 2"
For paravertebral anesthesia (cervical block—dorsal block—lumbar block)	22	2½"
	21	2½"
	22	3"
	20	3"
	20	4"
	19	4"
For sacral anesthesia—also called epidural and caudal block (needles with stylet, same as B-D No. 462LN)	20	3"
	19	3½"
For spinal anesthesia (needles with stylet, same as B-D No. 462LN)	22	3"
	20	3"
Abdominal field block	22	3"
	20	3"
	22	4"
	20	4"
	19	4"
For splanchnic anesthesia	19	5"
	Denman needle	

In connection with the use of needles, I must again emphasize the necessity for a strong but properly tempered, flexible needle. Many surgeons complain of their needles rusting. Nickeloid needles will not rust. Steel needles, after use, should be boiled, and then rinsed with either alcohol or ether and dried with the Brunet needle drier and the wire or stylet coated with oil. With these procedures, steel needles last a long time.

Before closing, just a word about the capacity of the syringe. Some surgeons recommend syringes holding as much as 40 c. c. or 50 c. c. We have found however, that the 10 c. c. type is the most practicable for all work and is convenient. The 3 c. c. type, however, is well adapted for spinal anesthesia and tonsil work.

229 West 101st St.

Lady Luck

VERLIN C. THOMAS, M.D.
AUTHOR OF "THE SUCCESSFUL PHYSICIAN,"
San Francisco, Cal.

A Little Luck is a Good Thing to Have

Webster defines luck as "that which happens to a person by chance". In the practice of medicine, where one is constantly dealing with so uncertain a thing as life, it is known that the element of chance is ever a close neighbor.

When we further consider the many trivial things that impress us, and tend to direct our actions, it becomes more evident that the physician is peculiarly susceptible to the workings of that uncertain and unmeasurable thing we call LUCK.

In this collection of lucky and unlucky happenings, to physicians there is no particular effort made to ferret out just how the unlucky happenings might have been avoided, or that made it possible for the lucky ones to occur. These happenings are taken note of here with particular reference to the *good* and *ill* effect that these happenings have had upon the mental, physical and financial affairs of physicians.

Some one has said that *"Luck"* ought, in most instances, to be spelled with a "P"—that *Pluck,* would transform most of the so-called unlucky things into lucky ones.

It is granted that in many things this is most likely true. But the things I have in mind and plan to here set down do not seem to come within this catergory as may be understood by the following cases, culled more or less at random, from the experiencs that have been told me by physicians from time to time.

These articles might have a little more of a scientific aspect if day, date and circumstances could be set down in detail, but the physicians who read this article will readily understand that in most instances *they* would not care to have *their* names attached to one of these chance and unlucky happenings.

Husky in Looks Only

A physician was called to a hotel one night a little while after dinner to attend a man who was supposed to be suffering from indigestion. The doctor walked into the room of the patient, accompanied by the clerk of the hotel, was introduced to the patient, a strong, well built man, and recited his story substantially as follows:

That he had had no serious illness since he was a boy and that he worked hard, lived simply, drank none and had been blessed with good health practically up until the time of this particular illness; when he stated that he had eaten something at a nearby restaurant, of the poorer quality, that apparently did not agree with him and that he had ben in more or less pain since dinner and wished something to relieve him.

A personal examination seemed to bear out the patient's statement.

The clerk was sent across the street to a nearby pharmacy for some soda, the physician planning to wash out the patient's stomach. In the meantime the physician intended to use a hypodermic of apomorphine. He went to a small dresser in the room and prepared the injection, the patient meanwhile sitting on the edge of the bed. While the physician was thus engaged, he heard a slight movement and groan and turned suddenly, to see his patient stretched flat on his back, stone dead.

Had this patient been given an injection and had his position from a social standpoint been at all important, it is easily possible to understand that any young physician might have been wrongfully accused of causing the premature death of what appeared to be a very healthy and robust man.

The Decrepit Old Man

This patient was apparently somewhere between eighty-seven and ninety years of age, with failing mentality. He appeared to have been in the preceding months in reasonably good health. Shortly after luncheon one day he was taken suddenly ill with cramps in the abdomen, vomiting and development of much abdominal gas. A physician sent him to the hospital. Energetic measures were pursued for two hours without apparent relief. All hopes of preserving life were abandoned and his relatives were notified. An early demise was anticipated.

Early the next morning, without apparent reason, complete evacuation of the bowels occurred and the patient went on to an early and complete recovery.

None of the physicians on this case know to this day what cured this man, but the attending physician was believed by the man and his relatives to have affected a marvelous cure. This was the third case this particular doctor had seen after opening his office, and it formed a stepping stone to a very lucrative practice.

An Emergency Call

A recent graduate who had just opened his office received a hurry call to an accident three-quarters of a mile from his office. He jumped into his car and proceeded full tilt through the city streets. As he was starting up a hill and passing a street car, a man dashed out from behind the trolley into the path of the doctor's machine, too quickly t oavoid a collision and was fatally injured. The young physician saw all sorts of accusations and suits before him and believed his usefulness in that city was gone.

It so happened that this man did not appear to have kith or kin; no one has appeared since to make any claim. Although the accident was no faut of the medical man, had this man been influential, or had he had relatives, or been permanently injured, instead of being instantly killed, his career in that city would have been blighted.

A Conscientious Physician

One day, after a series of operations at the hospital, an old, well-established and well-to-do physician, on the teaching staff of a college, was proceeding home for luncheon at a leisurely gait in his car when, within a block of his own gate, the young daughter of a close, personal friend, playing with some other children on the sidewalk, dashed into the street, into the path of his car, and died in a hospital in a few hours.

Suit was instituted by the neighbor and a coroner's jury accused the doctor of reckless driving. The next morning the doctor was found with a bullet hole behind his right ear.

The death of this child so upset him that it appeared that he could not face the community in which he was a respected member.

The Dying Chinese

An old-established and wealthy physician, taking care of one of the most influential women of the Chinese colony, found that she had a tumor of the abdomen of ill-defined character. The practitioner insisted upon an operation, but this was refused, the family believing that they would not reach the right kind of a resting place in after life if the body is mutilated. They concluded to change doctors.

A messenger was sent to the nearest drug store to inquire about other physicians. The clerk knew a young medicine man who had greatly befriended him and sent him. The patient was given some slight treatment, pending more complete examination and diagnosis, but she steadily grew worse, and was finally given up. She sank into a death-like stupor, and in the morning awakened to slight consciousness and went from this to complete recovery. The patient regained sufficient strength to make a trip from San Francisco to China and then to return. She is still living and is in apparent good health. The actual cause of her illness is unknown, but the young physician, because of the apparently miraculous cure, is now the best established and most frequently called medical attendant for the influential people of the Chinese colony. A large and lucrative practice resulted from this small incident. This appears to be a good piece of *Luck*.

Merit Is Not Always Recognized

An elderly lady, who had been ill for months and growing worse, applied to a young surgeon for relief. After using all means for proper diagnosis at his command, including the x-ray, he diagnosed cancer of the stomach. The patient did not desire operation, but a consultant strongly advised that this operation was the patient's only reasonable chance for life.

She was operated upon successfully and put to bed and appeared to be well on her way toward a perfect recovery, when some hair-brained nurse, and not knowing anything about the condition of the patient, at the patient's request, gave her a full tray of food, which the patient ate. She was immediately seized with cramps and severe vomiting, and died the following day from ruptured stomach.

Suit for malpractice was instituted against this physicia, and it had such a detrimental effect upon his practice and preyed so heavily upon his mind that he went to another community. The experience so upset his nerves that he has never since been able to operate.

The Chance Dinner Acquaintance

Happening to be in a certain locality of a large city at the dinner hour and seeing a sign on the door that home cooking could be obtained at a very reasonable price, induced a young physician to try that place for his lunch He was seated at the table with a young couple, who were eating at that particular place for the first time.

This chance acquaintance ripened into friendship and finally, through the instrumentality of this new-found friend, who happened to be employed by an insurance company and later its managing director appointed his chance dinner acquaintance the medical director for his insurance company.

Gonorrhea and Hard Luck Meet

A young physician starting in practice in a city found himself in debt. He was compelled to seek shelter in a cheap hotel, where he became friendly with the clerk, who also had fallen upon hard financial lines. The clerk acquired gonorrhea and the young doctor effected a cure, making a very sincere friend as well as patient.

As the clerk and the physician improved their financial conditions they moved to a better hotel, where as luck would have it, an elderly lady was taken seriously ill one night. The regular house physician being unavailable, the doctor's friend, who had become manager of the hotel, calls in his old friend. The patient was moved to a hospital, operated, and made a rapid and uneventful recovery. The patient was the mother of an executive of a railroad company, and the acquaintance and friendship thus made ripened and eventually our hero, through these means, became the chief surgeon of a great railroad.

The Surgeon Who Was Afraid of Blood

An eminent specialist in a large city was unfortunate enough to operate on an unknown hemo-phyliac. This patient bled profusely for two or three days, but was eventually saved by heroic measures on the part of the surgeon.

As a result the surgeon developed an unusual fear of bleeding during an operation, so that when he did a tonsilbetomy on his associate, he employed epinepploin in very large quantities to prevent possible hemorrhage. The patient changed color, sat up on the table and died. The shock was so great to the surgeon that he has been a broken man in health and practice to this day.

One morning, while operating at the hospital, my intern was suddenly called to another part of the hospital and there found an apparently healthy woman stone dead. Autopsy failed to disclose the reason for the sudden demise. I have in mind a well-known in heart disease internist who was called to see a patient taken suddenly ill. He proceeded in a leisure manner, completed most of his question, and asked the nurse to help him in raising the patient to a sitting position, whereupon the patient gave one gasp and died.

Suit was filed and $10,000 damages was assessed against the specialist for trying to make a correct diagnosis.

A clever operator was much overworked and went into the woods for a little hunting. After a successful and restful stay he and his party started back to civilization. A man was found along the mountain road by a wrecked automobile. He was unconscious, and the surgeon found he had a fractured skull. He was rushed to the city, operated on and cured. The man turned out to be the owner of a vast tract of virgin timber land and very influential.

Now all the rural dwellers in that section go hundreds of miles to consult that young surgeon who saved the life of the lumber king.

The man might as easily have been a laborer with no friends, no money and no influence. Real good Luck!

A hurried call took a clever surgeon to a sumptious suite of rooms in a prominent hotel, where he found a patient in a serious condition. At the hospital an infected gall bladder was diagnosed, an operation was performed, and after a rather stormy convalescence, the man recovered his health. He was profuse in his statements of gratitude to the doctor for saving his life, asked for his bill, and on a Saturday paid him in full by check with a substantial sum in addition, as an indication of his gratitude.

Tuesday morning the check was returned marked "No Funds," and the hotel reported that no trace could be found of their important guest.

We of the Occident do not generally subscribe to the idea of the Oriental mind, that "What is to be will be," but it seems a reasonably certain and safe conclusion to state that—

A LITTLE LUCK IS A GOOD THING TO HAVE.

On Parenteral Protein Therapy in Abscesses of the Axilla

S. OLEYNICK, M.D
Newark, N. J.

In the case to be cited the clinical picture consisted of a formation in the axilla of hard nodules, varying in size, often becoming confluent and thus forming large, painful masses. Such nodules gradually start to suppurate. Formerly they were thought to be abscesses originating in the sweat glands, until Gans (*Dermatologische Wochenschrift, 76, 1923,* p. 318) showed that the bacteria primarily invaded the connective tissue of the sebaceous glands of the hair and secondarily affected the sweat glands. Histologically, granulation tissue, highly inflamed, with a centrally located necrotic area, without the formation of a necrotic core, as commonly seen in furuncles, was observed.

This inflamamtory process, as a rule, is chronic, and it is rather difficult to influence it therapeutically. The nodules and the infiltrated mass become abscessed one after another, and infect the surrounding tissue. The usual therapy is ordinarily devoid of favorable results.

In one such case, which had had al kinds of treatments over a period of one or two years, and which after slight improvement still showed a recurrence of the abscessed nodules in the axilla, it was decided to employ aolan, a lactalbumin solution, said to be germ and toxin-free. Both axillae were infected and infiltrated with nodules with partial abscess-formation. The skin above the inflamed areas was very much irritated, due to the application of iodin and ointments which the patient had used.

Intramuscular injection of 10 cc. aolan was made. Twenty-four hours after the first injection, the local pain increased slightly and the infiltrations became softer. A few days later it was noticeable that the abscesses were becoming absorbed.

Altogether the patient received four intramuscular injections, 10 cc. at intervals of five days. At the time of the fourth injection pus, nodules and pain had been eliminated. After eight months' observation, there has been no recurrence of the original lesion.

The result obtained in this type of case is being published as a contribution to the treatment of abscesses in the skin by means of a non-specific protein agent. This therapy assumes that injections of such agents stimulate a flow of leucocytes and of antibodies to any area of infection, thereby fortifying the inherent resistance powers of the body to disease-bearing bacteria.

E. F. Muller claims that this influence is exerted through a stimulation of the parasympathetic portion of the involuntary nervous system and that favorable results follow the employment of such agents, no matter where the area of infection. On the other hand, he states that no effect is produced by them when injected in the healthy body.

The writer has employed non-specific protein therapy in a variety of skin infections, with varying results, frequently good, occasonally negligible, and has come to the conclusion that the latter results occur in those infections in which, as the result of chronicity, pathologic changes of an irreparable nature have arisen which no medication can influence. In such tissues the normal resistance powers of the body have been lost, and therefore no stimulating influence avails to restore, much less to augment, them, thus justifying the philosophy of the poet who wrote: "The mill will never grind with the water that's gone bye."

The uses of non-specific protein agents in the early stages of infection should prove more effective than when employed late in the course of disease.

107 Clinton Ave.

Public Health

"Health Audit"—Aid to Longer Life

CHARLES H. MAYO, M. D.
Rochester, Minn.

In the past twenty-five years more has been accomplished in medicine than in all the centuries before. Scientific medicine has done about all it can for the mass diseases, now practically gone, but which used to frighten and destroy the people by tens of thousands.

In the fourteenth century fifty million people died of the plague. There was only one way of escaping it, and that was for people to leave their homes and run away to places free from it. In the eighteenth century many millions, probably one hundred millions, died of nothing but small-pox.

Today each man is dying his individual death, and it is up to us to see if we cannot reach him in some manner and persuade him that it is worth while, when he is still vigorous, to learn to keep his machinery from going to pieces from neglect.

In the sixteenth century, man had but twenyt years of average life. It is fifty-eight today, and you wonder whether you will be able to reach the three score and ten of the Bible. We hope to be able to do that from a medical standpoint within the next twenty-five or forty years.

It is coming. We know it is coming. Our problem is advancing the age of our people by teaching men, women and children the art of keeping well. There are thousands of deaths annually, which, with reasonable precaution, could be prevented. This means that society is not availing itself of the medical knowledge already at its disposal. Of the 3,000,000 people on the nation's sick list every day, one-fourth to one-third are needlessly so.

To combat this unnecessary suffering and waste of human resources, to induce better health and longer lives, a campaign of health education such as is now being undertaken by the Gorgas Memorial Institute is of the highest value.

An important phase of the work is the periodic health examination or health audit, the only known way of discovering certain incipient diseases before the individual realizes anything is wrong. In the beginning, Bright's disease, apoplexy, and high blood pressure are usually symptomless to their victim. But discovered in time by the health audit, the advice of the family doctor followed out, you are put on the road to recovery before your vital organs are wrecked beyond repair. Take as good care of your health as you would of your automobile and have your vital structures tested yearly to locate the enemy of your health.

A second vital function, which is truly preventive medicine, is teaching the individual the ill effects of wrong habits of living, which if continued. will lead to illness. Improper eating, and getting insufficient exercise each day are among them.

Zinc Stearate Poisonous When Inhaled

A special committee of the American Medical Association has recently investigated reports on 131 cases of poisoning resulting from the inspiration of zinc stearate powder by infants. Zinc stearate is sold directly to the laity as a dusting powder to prevent chafing. Twenty-eight cases of 21 per cent resulted fatally. The committee recommended that manufacturers of the powder be requested to use a self-closing type of container which does not lend itself to manipulate by the infant and to place a caution label on the container. The committee also recommended that the use of the powder be discouraged by physicians because of its lack of therapeutic value.

Safety Measures as a Health Hazard

Dr. C. T. Graham-Rogers, Medical Inspector of Factories for the N. Y. State Department of Labor, says safety first does not merely apply to the greater accident hazards such as machinery, falling objects or railway crossings, but also to the minute personal hazards which later may become serious; among these may be mentioned care of the skin, especially that upon the hands.

Occupation in many of the industries exposes the worker to the hazards of many harmful substances which possess the properties of burning or irritating the skin. As a protective measure, gloves are furnished the worker.

A pair of rubber gloves supplied the worker to protect the hands from the action of acids or corrosive material may constitute a hazard if they are not in perfect condition.

An acid oozing through a minute hole in a rubber glove will be retained and pressed against the skin by the lightness of the glove, resulting in more serious damage to the skin through being unnoticed due to presence of gloves than would a quick dip or accidental splash in the case of unprotected skin.

During the inspection of a factory where hydrofluoric acid is used in the process of etching glass, examination of the worker engaged in dipping showed his hands in a condition as expressed by some workers to actually have holes burned in the flesh, due to the acid leaking through minute holes in the rubber gloves provided, but not suspected.

Many other instances could be cited of burned and inflamed hands, all due to lack of properly examining the gloves before using.

No operator would start a power press without first seeing to it that the safe guard was attached and working properly.

No operator should start work without seeing the rubber glove safe guard is in safe condition and proper to work with.

These are but one of the many conditions which the student or worker in the field of industrial hygiene must give attention to in order that we may not make a safety measure a health hazard.

American Public Health Association Annual Meeting,

The Fifty-Fourth Annual Meeting of the American Public Health Association will be held in St. Louis, Missouri, October 19-22, with the Hotel Statler as headquarters. This Association is the professional society of sanitarians in North America, and its Annual Meetings always offer a program of exceptional interest to public health workers. Several special features add more than usual interest to this year's program.

In a broad and developing field such as public health, there is danger that its diverse branches will not maintain contact with each other and with the whole. The American Public Health Association, representing as it does all public health specialties, both official and non-official, brings together at its meetings and includes in its programs the various elements, personnel and subjects that go to make up our public health structure. With a view to correlating these elements, it has this year arranged for a greater number of joint sessions and general sessions than is customary.

The Association's nine Sections—Public Health Administration, Laboratory, Sanitary Engineering, Food and Drugs, Vital Statistics, Industrial Hygiene, Child Hygiene, Health Education and publicity, and Public Health Nursing—will have programs of their own consisting of one or more sessions. In addition, in a number of instances two and sometimes four sections will combine to discuss in a joint meeting some outstanding development of interest to the various groups. One subject to be discussed from four angles is the epidemiology of respiratory diseases; another is oyster pollution. There will be also five general sessions participated in by the entire Association. In the twenty-seven meetings arranged for, more than one hundred and twenty-five papers and reports are scheduled. These figures do not include luncheon and dinner sessions devoted to particular topics, nor a special session on Mental Hygiene sponsored by the National Committee on Mental Hygiene.

The Local Committee on Arrangements has provided an attractive program of entertainment including trips to points of general and scientific interest in and near St. Louis, free tickets to the theatre and the traditional reception following the opening meeting. The ladies are especially invited to attend and plans have been made to occupy them during the full period of the meeting.

Members of the Association and their families will receive a twenty-five per cent reduction in railroad fare traveling to and from the meeting. Non-members should make application for reduced fare to Mr. Homer N. Calver, Executive Secretary, American Public Health Association, 370 Seventh Avenue, New York City. The Secretary will also gladly furnish additional information regarding the meeting and the program.

Prophylactic Vaccination Against Rabies in Dogs

In countries, states or districts where there is no satisfactory regulation regarding muzzling and dogs are allowed to run loose, rabies may increase alarmingly, as it has in some of the southern states. The Department has received a number of inquiries regarding the value of a method of prophylactically protecting dogs against rabies (by means of a simple injection of a specifically prepared antirabic vaccine) which was published by two Japanese investigators, Umeno and Doi, in 1921. This method, which promised to attack the problem of rabies control at its root, has since been confirmed by a number of experimenters.

Recently, Schoening from the Bureau of Animal Industry, United States Department of Agriculture, has reported a series of apparently well-conducted experiments which seem to suggest the presence of more than one strain of rabies street virus. Definite protection against intraocular injections of two different strains of street virus found in this country was afforded by the vaccine prepared as are probably all other rabies vaccines manufactured in the United States, from a strain of fixed virus obtained from the Pasteur Institute in Paris. It did not protect however, against a third strain of street virus also encountered in this country. These results irrespective of whether they should be interpreted as indicating only differences in virulence or actually proving the existence of multiple strains differing immunologically, raise the question of the practical value of this method in its present form.

More experimental work must be done before vaccination can be recommended for general adoption. In the meantime, emphasis should be placed on the proven methods of prevention and cure; early diagnosis of the disease in the dog and the early Pasteur treatment of the infected human being. Above all it should be remembered that muzzling of dogs is the most effective method of prevention available.—*Health News.*

The Control and Extermination of Mosquitoes

The elimination of mosquitoes is a difficult problem requiring the careful consideration of many details. The control of mosquitoes is directed at the larvae stage, which means the elimination or oiling of bodies of water, known to be breeding places. The most common mosquito in New York State breeds in tin cans, rain barrels, troughs, bird baths, cisterns, and other small bodies of water. The control of these common house, or *culex* mosquitoes, therefore requires that such containers either be emptied of water, or screened.

Other species of mosquitoes, including the *anopheles,* which are carriers of malaria, lay their eggs in natural bodies of water. The prevention of breeding in these waters is best accomplished by drainage or filling, because these operations are permanent and do not involve maintenance costs. If a natural body of water, such as a pool, cannot be drained or filled, it may be feasible to utilize fish to consume the mosquito larvae, provided aquatic vegetation is not prolific. Fish control involves the introduction of top feeding minnows, sun fish or gold fish into such bodies of water and the removal of aquatic vegetation around the edges, so that the mosquito larvae will not be hidden from the fish.

The spraying of oil on the surface of bodies of water overgrown with vegetation leads to the wastage of considerable oil which clings to the vegetation about the water surface, and thus a great deal of the oil is not effective in killing mosquito larvae. This fact has led to the development of an economical means of distributing the oil. For this purpose soft wood sawdust should be soaked over-night in a mixture of one part waste lubricating oil and one part kerosene. The surplus oil should be allowed to drain from the sawdust the following morning. The semi-dry material can then be transported in bags or buckets and distributed over the surface of the water by being thrown as seed is sown. The oil is given up by each grain of sawdust and forms a film on the surface meeting the film from other flakes of sawdust. The sawdust does not cling to the vegetation above the surface. If the sawdust can not be readily sown and is sticky, less oil should be used, otherwise the method will have no effect. About two gallons of oil will be absorbed by one bushel of dry sawdust, although this amount should be varied if necessary.

The surface feeding *anopheles* mosquito larvae may be killed by the use of Paris green, distributed over the surface of water but this poison is not effective against other types of mosquitoes. One part of Paris green is mixed thoroughly with one hundred parts of dry inert material, such as road dust. This mixture is scattered over the surface as seed is sown. The operator should avail himself of the aid of winds in scattering this material, otherwise a great deal is likely to be blown away from the water and wasted. The quantity necessary is about one ounce of Paris green per 2,000 square feet of water surface. Two quarts of mixture is necessary for this area of water surface.

The control of mosquitoes should be based on a knowledge of mosquito breeding at various points of a suspected breeding area, otherwise oil may be used on water which is not in reality breeding mosquitoes. Mosquito breeding may be ascertained by quickly skimming the surface amongst the vegetation with a white enameled dipper. The dark brown and black mosquito larvae can be seen easily against the white background of the dipper. Care should be exercised that the larvae are not scared when the operator approaches the edge of bodies of water, otherwise they will swim to the bottom and can not be caught.—*Health News.*

Childhood Fears

Fear is perhaps the most uncommon emotion which brings experience, yet it is extremely doubtful if the child has any inherent fears at birth, says Dr. D. A. Thom of the U. S. Department of Labor. Most fears are produced by some experience through which the individual has had to pass in early life.

Some children are afraid of anything new or strange, but they soon become accustomed to it if they are allowed to do so gradually. It is a mistaken notion that a child should be pushed into a situation where he is afraid in an effort to "train him." A little child who cries at his first experience of bathing in the big ocean is not helped by being thrown in, but on the contrary gets an experience of dread and fear which may not be easily overcome.

Fear of animals may occur at a very early age but usually passes off as soon as the child becomes accustomed to the sight of them, unless he has some especially unfortunate experience in being frightened either by the animal itself or by threats that the animal will get him if he is not a good boy.

Many children are threatened with the policeman or the "bogie man." Sometimes mother speaks to the ragman and asks him to take a naughty boy away in his bag. It is particularly unfortunate when mothers use a threat of the doctor to frighten their children into obedience, for the time may come when a child's life may depend on a doctor's being able to get him to take treatment without crying or struggling. "The doctor cuts the fingers of little boys who touch things" is not good preparation for such an emergency.

Often fears are due to unpleasant experiences for which the parents are in no way to blame, and may even extend to things which are merely associated with the unpleasant experience. For instance, a child who has been hurt in a doctor's office may be afraid to enter any place which looks like a doctor's office. A book agent, with his black bag, may be a terrifying figure to such a child. This is a very different thing from fears that are produced in the child's mind by threats. The fears based on a real experience can be overcome by gradually associating pleasanter things with the same situation or by appealing to the child's courage to face his fears bravely.

Air Mail Used to Rush Poliomyelitis Information

On August 3, a telegram was received from the president of the California State Board of Health requesting that regulations of this department pertaining to poliomyelitis be sent by air mail. Circular 32, an eight page pamphlet containing general information and including sections of the Public Health Law and regulations of the Sanitary Code relating to poliomyelitis was promptly forwarded in the manner requested. According to post office schedules the letter should have reached San Francisco within 24 hours.

The report of the Surgeon General of the United States Public Health Service for the seven weeks ending July 18, shows 154 cases of this disease to have been reported to the State Board of Health of California during the period specified as against 8 cases for the same period last year; by far the greatest increase in number of cases for any state. Illinois, Minnesota, New Jersey and some of the southern states, sections previously not seriously affected, now show rather marked increases in the number of cases.

Peculiar Conditions in Whittier, Cal.

The astounding developments growing out of the giving, building and maintaining of the Murphy Memorial Hospital at Whittier, Cal., by Colonel Murphy have been commented upon in both scientific and more public literature. The outstanding facts are that Colonel Murphy had designed and built an unusually beautiful hospital at Whittier as a memorial to his father. Considerably more than a third of a million dollars was spent in construction alone. At the same time the benefactor made provision for doubling the size of the hospital later on again at his expense, and included a bequest in his will of $200,000 as an endowment in perpetuity to take care of citizens of the community who would not be able to pay the cost of good hospital service.

Colonel Murphy then entered into negotiations with the authorities of the city of Whittier by which he donated the hospital to the municipality under certain conditions. The outstanding feature of these conditions was, that the hospital was always to be maintained as a "Class A" hospital. This document was duly and as legally executed as it is possible to do, in dealing with our small town governments. The trustees, in carrying out the requirements for a first-class hospital insisted, as is required by the American Medical Association, American College of Surgeons, and all other good medical organizations, that none but educated doctors of medicine be permitted to practice in the hospital. This procedure aroused the ire of the many classes of cultists and those who do not believe in medicine at all as well, and through the usual legal machinery they brought the question to a vote of the people of the municipality. The cultists, aided, we are sorry to say by a few licensed physicians, succeeded in carrying the election, the result of which was to treat the benefactor, who is still living, with discourtesy, to express it mildly, and to treat the official legal paper of the municipality as a proverbial "scrap of paper." This action opened the hospital to all and sundry.

The next stage in the development of this debacle was that Colonel Murphy, through his attorneys, made preparations to enter suit to declare the original trust void because of abrogation of contract on the part of the city and demanded the return of his property to his estate. In the meantime, Colonel Murphy's health continued to fail and the lawsuit was given up and has now been withdrawn, and with that withdrawal the benefactor has deleted the $200,000 endowment which had been included in his will, and has otherwise amputated himself from the situation in the following letter:

"May 23, 1925.

Board of Trustees of the City of Whittier,
Whittier, California.

Gentlemen—Receipt is acknowledged of your letter of May 18. I cannot appreciate or agree with your position. I am addressing this final letter to you in order that the records of the city may clearly show that I do not concur with or acquiesce in the statements contained in your letter, or the manner in which you propose to operate the Murphy Memorial Hospital.

Your attitude absolutely ignores the condition in the original deed of gift that the hospital should be always maintained as a Class A hospital: namely, as a standardized hospital according to the high standards of the American Medical Association and the American College of Surgeons. It also ignores the absolute promise of the city (contained in the resolution of acceptance by the Board of Trustees of the City of my offer to build the new wing) that the hospital should always be maintained according to the high standards then established, which the records of the hospital show were exactly those of a Class A hospital, as above defined. I am convinced that the city is both morally and legally obligated to maintain these standards, and, had my health permitted me to continue my case against the city until it could have been tried upon its merits, I feel confident that the court would have so decided.

Common honesty and fair dealing require the city to maintain the hospital according to these standards, even though the city were not already legally bound to do so. Such being the condition of the gift, I do not believe that there is any merit in your claim that the law of the state of California requires you to do anything other than to live up to the terms and conditions of the gift which permit anyone to practice in the hospital who has the requisite educational and ethical qualifications to practice in a standardized medical and surgical hospital.

Unless the hospital is maintained as a standardized hospital (which it will not be if practitioners licensed to practice any method of healing, or who are unethical in their practice, are admitted to its staff), the reputation of the hospital will rapidly dwindle and the people of the city of Whittier will not receive the high type of modern hospital service which it should have and which I intended to give it.

It is because of the attitude of the present officials of your board and of the present board of hospital trustees in lowering the standards of the hospital and in ignoring the city's agreement with me that I have lost my former keen interest in the hospital. It was because of such attitude, and because of my recent poor health and an expected trip to my home in Charleston, West Virginia, that I dismissed the suit against the city, without prejudice to my rights as donor. Because of such attitude I feel that not only the money invested by me in the hospital is a loss, but that the hospital will no longer be the kind of a memorial to my beloved father and mother which I intended it to be. So I have caused their pictures to be removed from the hospital.

My views have been so clearly set forth in this and my prior communications that there ought not to be the slightest misun-

derstanding as to my position, and as far as I am concerned, please let this letter finally close the matter. For these reasons, and because of my health I do not desire any further discussion of the subject either by letter or interview.

Yours respectfully,
(Signed) SIMON J. MURPHY, JR."

Dr. H. P. Wilson, the personal physician and the personal friend of Colonel Murphy, who took such an intense interest in advising Colonel Murphy constantly in the various steps by which he had hoped to create a fine hospital to serve a small community, in forwarding the above letter from Colonel Murphy, says: "There is a distinct element among the best people of this community who are chafing under this thing and who still hope that the hospital may be restored to its former dignified status."

Needless to say that this hospital, at one time so full of promise, will not succeed in obtaining accredited standing before medical bodies until some assurance of the right kind of stability has been pledged and practiced under this pledge for a sufficient length of time and with earnestness of purpose and that kind of municipal regard for obligations not heretofore manifested.

This matter is given thus fully because it is no longer a little local problem for a small community in California, but has reached around the world in the news columns and editorial comment as one of the outstanding shames in modern health betterment.—(*Cal. & West. Med.*, July, 1925.)

California Leads in Smallpox

Also in anti-vaccination propaganda. The two things go together. We led all the states during 1924 with 9,425 cases of smallpox and fifty-six deaths. Ohio was our closest competitor, with 5,597 cases and fifty-eight deaths.

Oh, well, the anti's must spend some of their money, but why purchase a repulsive disease like smallpox with it? The pathetic feature of this *totally* (100 per cent) useless and unnecessary injury to health and sacrifice of life is, that many of the victims were children.—(*Cal. & West. Med.*)

When Is a Hospital Not a Hospital?

According to William C. Hassler, M.D., the official public health doctor of San Francisco, *"Christian Science Rest Homes"* are hospitals—at least from legal and public health viewpoints. The doctor elaborated his statement to say: "Unquestionably, this institution is a Christian Science hospital, but Christian Science does not recognize disease and so does not recognize hospitals as such and calls them rest homes."

Nay, nay, holds Mr. McLeod of the Christian Science Publicity Department: "The statement that 'Christian Science does not recognize disease' is a complete misapprehension of its teaching and practice. In a relative sense, Christian Science recognizes disease as a mortal condition, to be rejected and destroyed *in accordance with God's law in the same manner as Jesus Christ destroyed it.*"

This and other similarly significant statements from similar sources makes illuminating reading, particularly in connection with proposals to change the title of Christian Science practitioners to Doctors of Christian Science and with active attempts to give these people, BY LEGISLATION, all rights to treat patients under the Industrial Accident Law now included in physicians' license.—(*Cal. & West. Medicine.*)

Non-Hazardous Industry A Myth

There is no such thing as a non-hazardous industry—this is the conclusion of the National Committee for the Prevention of Blandness as indicated in the report of an extensive study of eye hazards in industrial occupations recently completed by the Committee.

The report declares that "of the 100,000 blind persons in the United States approximately 15,000 are the industrial blind—persons who have lost their sight in the pursuit of industrial occupations—and there is in addition to the totally blind a much larger number of men, women and children whose vision has been so impaired by the eye hazards of industry that they are handicapped throughout life. Both of these classes, the industrial blind and the workers whose vision has been seriously impaired by the hazards of other industrial environment, grow larger each year."

There is hardly an industrial occupation in America, according to the National Committee, which does not add each year to the steadily increasing number of the blind and the near blind. Referring to the experience of just one insurance company which in three and a half years settled claims involving 1,049 cases of permanent disability resulting from eye injuries, the report says: "The loss of 82 eyes in the presumably safe occupations of merchandising, farming, and textile manufacture is further proof of the statement that serious eye accidents are likely to occur wherever men, women and children are employed. There is no such thing as a really non-hazardous occupation."

The Committee found that although from a national point of view the metal manufacturing industries are the source of the greatest number of serious eye injuries, in Pennsylvania the coal mining industry ranks first as a cause of industrial blindness. In Wisconsin it was found that hand tools constitute by far the greatest single cause of eye injuries, being responsible for 44 per cent. As an example of the important part that eye injuries play in the whole problem of industrial accidents the report cites the experience of a large shipbuilding company in whose dispensary 38 per cent of all injuries treated were eye injuries. More than 4,300 eye cases were treated in the dispensary of this one company in one year.

The section of the report dealing with the nature and cause of eye injuries closes with the statement: "Until industry knows exactly where, when, how, and why eye accidents occur it will not be in a position to do justice to the existing opportunities for the elimination of such accidents, much less to develop new means of prevention. The keeping of detailed and accurate records of the nature, causes, and costs of eye injuries on the standard basis developed by the International Association of Industrial Accident Boards and Commissions is, therefore, recommended as the first step in any campaign for the prevention of eye accidents in the individual industrial plant or in an entire industry."

Copies of the full report, a volume of 250 pages, may be secured from the headquarters of the Committee for the Prevention of Blindness, 130 East 22nd Street, New York City.

The Possible Relation of Copper to Disease Among the Korean People

More than ten years ago, Ralph G. Mills, Chicago, says his attention was directed to possible relation of copper to disease by some attempts to influence the course of experimental tuberculosis by means of copper salts. Difficulty was experienced in introducing the material at frequent intervals and for a sufficiently long period of time without causing too much injury from the repeated puncturing with the hypodermic needle. At this time he was director of the Research Department of the Severance Union Medical College, at Seoul, Korea, and immediately realized that the Korean people, numbering about 17,000,000 were voluntarily performing this very experiment in their everyday life. Brass is the universal material out of which they manufacture the rice and other food bowls, spoons and some of the kitchen utensils. Wine bottles, some of the stills for making fermented liquors, and a form of chafing dish are also made of this substance. Food is served in these vessels, or, in some instances, cooked in them, and may be allowed to remain a longer or shorter period of time. Working men usually carry their lunch to the field in such bowls. Any food left over serves for the evening meal or is brought back home. In the kitchen, remnants are frequently left in the bowls from one meal to the next. The nature of some of the foods is such that they would probably exert a solvent action on the brass. A native salt pickle, similar to saurekraut, contains a considerable quantity of organic acid. Vinegar is used to a slight extent. Meats, fish, sesame oil and other fried and greasy foods form a reasonable portion of the daily menu. During the consumption of the food, every time a brass spoon clicks against a brass dish a minimal amount of the metal is scratched off and is swallowed with the food.

Children are given more or less solid food within a few days after birth and the constant ingestion of copper continues until death. The life span seems to be reasonably long, a couple of dozen centenarians having been listed by the authorities a few years ago. The effect of copper on spontaneous tuberculosis appears to be negligible, the incidence being about as high as in other countries similarly situated. When it occurs it is more often the acute fulminating or military types than the chronic phthisis, reflecting the lack of childhood immunization, perhaps with the bovine strain. The people themselves feel that the use of brass utensils is in some way a protection against disease. A family may be so reduced financially that it is compelled to sell off most of its possessions, but the brass dishes are the last to go. Bowls of glazed earthenware and spoons of iron may be purchased in the markets for a small fraction of the cost of the brass ones, but the people cling persistently to the time-honored custom. When asked for an explanation, they say that brass bowls will protect them from epidemic disease. Mills hopes that careful search will be made for evidences of copper poisoning in clinical and necropsy material in the Orient, and special study made of those cases of diabetes and cirrhosis as occasion offers.—(*J. A. M. A.*)

Diagnosis and Treatment

Active Principles of Cod-Liver Oil

Harry E. Dubin and Casimir Funk, working in the Biochemical Department of the H. A. Metz Research Laboratories, have succeeded in developing a practical method for the preparation of a concentrate containing the non-saponifiable fraction of cod-liver oil. This concentrate, which contains the antirachitic and antiophthalmic vitamins, the factors responsible for the therapeutic value of cod-liver oil, has been named Oscodal. From 10,000 pounds of cod-liver oil it is possible to isolate one pound of concentrate containing practically the total vitamin content of the original oil. Chemical analysis shows the presence of C, H, and O only. Additional work is in progress in an effort to purify the concentrate still further and to determine its exact chemical composition.

That this fat-soluble vitamin concentrate is clinically as effective as fresh cod-liver oil, has been demonstrated by the work of Dr. Louis Fischer, Director of the Infantorium and Nursery of the Heckscher Foundation, New York City. For clinical use, the concentrate is available to the medical profession as a prescription product in tablet form, each tablet being equivalent to a half teaspoonful of fresh cod-liver oil. The advantages of cod-liver oil in this form are both obvious and numerous. For example, it presents a means of adjusting the fat-soluble vitamin content of an individual's diet without unduly increasing the amount of fat to be metabolized.

Aside from its clinical value, the concentrate is said to have a very practical application in the margarine industry.—(*Industrial and Engineering Chemistry*, Vol. III, No. 14, July 20, 1925.)

An Adequate Examination at the End of the Clinical Courses

David L. Edsall, Boston, points out that the purpose in the final examination is to determine whether the candidate is prepared to use as a capable clinician should use what he has gained from any and all sources; not to determine simply how much of this he can remember, but how well it serves him in comprehending and elucidating problems. The most usual methods of examining in schools, in colleges, in professional courses and in licensing boards tend very strongly to make more separate and distinct things of each subject rather than to coordinate them. This is neither unnatural nor harmful when the subjects are quite distinct things and have only occasional and casual relations, as is true in many subjects taken in secondary schools and colleges. When, however, a group of subjects have not only individual disciplinary or cultural purposes but also intimate and manifold interrelations, the examinations need, toward the end and certainly at the end, to take account of this. When the course is a professional one, all the subjects in it are not simply interrelated; they are in no true sense distinct subjects at all but are parts of a whole, and the whole is defective unless they are well coordinated in the mind of the student at the end. Whatever may be said in praise or condemnation of any system of examination, it is undeniable that, aside from the personal influence of exceptional teachers, the character of the examination that he knows is in prospect is the most potent factor in determining the manner in which a student attacks a subject. It is the most definite and forilible source of pressure that is put on him. The customary form of examination brings the pressure on the accumulation of facts and on the intensive study of each subject, but study of it separate and detached from the other subjects. Accumulation of facts and knowledge of the methods used in the work are essential. These are no less essential in the clinical subjects than in the medical sciences. It is desirable that as individual courses are completed it be determined as is customarily done, whether the student has acquired a suitable knowledge of facts and methods; but these facts and methods are only the building stones which must be shaped and fitted together to form a structure of which not the parts but the whole provides fitness to practice.

When they are of the usual character alone, the strong influence of examinations tends to be against coordination, not for it. Pressure must be brought in the other direction to offset this, and the pressure must at the end be the dominant one. It must be so conspicuous even in the distance that its influence is exerted on the student long before he reaches the end of the course, and when he does reach that point this influence should have left a profound impression and have habituated him to a broader method of thought and given him training in employing that method himself.

There is no known way in which this can be accomplished in a wholly satisfactory manner or with all students, but there is a method by which a very appreciable amount of the desired result can be reached, a method that has in principle long been used in examining for higher academic degrees and has also been increasingly employed in some colleges for a considerable time in undergraduate courses in arts and sciences. Furthermore, in Harvard we have used this general method in medicine for more than ten years and in a definitely stabilized form for the last five years. Questions are set that demand the employment of any knowledge either directly scientific or more practical, in any subject of the course, so long as that knowledge bears on the comprehension and elucidation of the particular problem at hand, the problems set being of a clinical character. The method demands a weaving together and statement of this knowledge toward a demonstration of the proper understanding of the case at hand and of its diagnosis and treatment. The character of the examination is essentially this: All students are given a written general examination at the end of the fourth year, in order to see how well and in how orderly a way they can coordinate information from various sources toward solving a definite clinical problem. They are given a long time to answer these questions, a half day on one question, from 9 o'clock until 2. We should be willing to let the men have access to the library in answering these questions just as a physician consults his library. The questions are of such a character that in only slight ways could he thus aid himself in covering up actual ignorance. He must have done his work well beforehand in order to answer effectively. Mere reviewing is not sufficient to meet the situation. This has not been done, however, because it is, practically, difficult to carry out. They are, then, given these questions for the purpose of seeing how orderly a mind they have, how well they can present the information they have and analyze the problem and reach a conclusion on the basis of their information.

We should like to conduct also an oral examination on patients with all students, but difficulties of carrying this out have been in the way as yet. All men, however, that are candidates for honors are given oral examinations on patients they have studied, as well as men in danger of failing, and any student may be called for such an examination. This examination is a difficult one to carry out. It requires a great deal of care and thought in setting the questions, and it requires a great deal of thought in carrying out the examination and in interpreting the results. Three teams read each book, those three representing clinical branches and some one or other of the medical sciences. If there is any doubt regarding any book in the minds of the team, they turn it over to another team, who also read it in order to give a fair decision on the man. There rarely is doubt, and the several examiners usually come to the same conclusion. The effect on the student is interesting. Almost unanimously the classes stated that the general examination was the fairest and most effective method that they had ever met, and they requested that honors be determined entirely by this general examination, as they said it went further than anything in the course to determine who was an effective man at the end of the course. The effect on the faculty is the other thing that is of interest. The large board of examiners, in the first place, have a wholly different point of view about their teaching from what they had before. The student's point of view, his questions, and the actions of the examining board lead all the students of the faculty to think and to teach in this line more than they would without this method. It becomes consciously or subconsciously demanded by many students; and if many students demand a thing, teachers give it to them. This examination has another effect which is very important to a medical school; namely, it gives the most graphic method of recognizing the weak and the strong parts of the actual course in the school. The examining committee makes a careful study of the results and reports on them as to the defects, the misunderstandings or what not that seems to be apparent in the minds of students often enough to make them significant.—(*J. A. M. A.*)

Are Modern Public Health Departments Becoming Great Organizations for the Practice of Medicine?

A growing number of writers, medical and non-medical, believe that many health departments are going far beyond their legitimate business. Doctor C. D. Selby, in his inaugural address as president of the Ohio Medical Association (*Ohio Med. Jour.*), sums the situation up in a state where the issues have been much discussed: "The 'modern health department' wishes to perform all kinds of medical service for the public, vaccinations, Schick tests, the Dick treatment of scarlet fever, the treatment of tuberculosis, etc. It is hardly necessary to say that this policy is fallacious. It is our duty as physicians and as a profession to bring health officers to understand that *every physician is a health officer*, and that these treatments which health officers are attempting to apply en masse are treatments that can much better be applied by individual physicians. The best health officers are those who secure the co-operation of physicians and persuade them to become individual health officers for their clientele."—(*Cal. & West. Medicine.*)

Atresia of the Cervix

David Feiner, of Brooklyn, N. Y. reports a case which exhibits an interesting combination of a genital anomaly, uterus subseptus, with atresia of the cervix, associated with delayed puberty and amenorrhea, with ultimate hematometra, and hematosalpinx.

Miss A. B., thirty-five years of age, was first seen February 1, 1923. Her chief complaint was pain in the left lower quadrant, and amenorrhea. She had had scrofula and Pott's disease as a child. For past two months, patient has had suffering from pain in left lower quadrant, which is not constant; describes same as "feeling a lump in the side." Appetite good, slightly constipated, no nausea or vomiting, no loss of weight or strength. Patient has never menstruated, or experienced any menstrual molimina. Physical examination revealed a rather slim, anemic-looking, adult female patient; skin wrinkled and parchment like. Neck showed scars of old healed scrofulous glands. Chest considerably deformed, with marked kyphosis. Breasts were thin, flat, and poorly developed. Cardiac auscultation revealed a harsh, systolic murmur, heard at the apex, and transmitted to the axilla; muscular quality of sounds, fair. Abdomen, negative.

Vaginal introitus admitted one finger with difficulty; no external signs of infection were visible. The cervix was represented by a dimple in the vault of the vagina, and showed no evidence of endocervicitis. The uterus appeared normal in size and position, but was extremely sensitive on palpation. In the left pelvis could be palpated a soft cystic mass, the size of a tangerine orange.

The patient disappeared from observation for period of one month, and then again consulted the writer, for the same complaints of pain over the left lower quadrant, and, in addition, over the hypogastric region. A vaginal examination showed the left-sided mass still present, and slightly increased in size.

The patient was admitted to the Beth Moses Hospital, March 4, service of Dr. H. Vineberg, with diagnosis of ovarian cyst, or tuberculosis of adnexa.

At operation, the abdomen was entered by a median incision. The uterus appeared moderately enlarged and distended, and suggested retention of blood; the left tube was dilated to the diameter of 4 cm., sealed at the fimbriated end, reddish in color, and appeared to contain blood; the right tube was slightly distended, and similar in appearance. Both ovaries were apparently normal. A vertical incision in the anterior wall of the uterus opened into a hematometra, and exposed an anteroposterior vertical septum, dividing the organ into two separate cavities, with a small communicating opening in the upper limit of the partition. There was also an atresia of the cervix, the entire canal being replaced by a block of fibrous tissue, which was so dense as to defeat an attempt to pass a probe, from above, down through the canal, and into the vagina.

After the excision of the uterine septum, the following procedure was adopted in an attempt to establish a permeable cervical canal. The bladder was separated from the uterus, and the entire length of the cervix exposed; the cervicovaginal junction divided, and the external os brought into view; a small, transverse incision was then made across the midpoint of the anterior surface of the cervix, and a probe forced down from above, through the internal os, to this point, and a second probe passed in a similar manner, from below, through the external os, and upward to reach the same midpoint, thus establishing the patency of the canal. The incision in the cervix was sutured, the cervicovaginal junction restored, the bladder replaced, and the uterine incision closed. A salpingostomy was done to permit the escape of blood from the hematosalpinx. An iodoform pack was left in the newly constructed cervical canal.—(*Am. Jour. Obst. & Gyn.*, No. 4, 1925.)

Morbid Proclivities of the Rheumatic Child

Dewellyn of London says the essential attribute of the rheumatic child is instability or hypersensitiveness. He is, par excellence, of the hypertonic neurophathic kind, highly imaginative, excitable, very susceptible to cold, and readily fatigued. All, again, have noticed their tendency to emotional crises, night terrors, stammering, muscular tremors, athetotic movements, what Goodhart terms subchorea and last but not least, their tendency to tetany.

Their inborn instability is further disclosed by symptoms indicative of vasomotor ataxia—cold extremities, dead fingers, chilblains, or true Raynaud's disease. Also, by their proneness to fleeting urticarial or erythematous raches, to cyclical vomiting, bouts of epigastric pain with diarrhea, or mucous colitie, not to mention asthma, and migraine, and moreover by the striking manner in which these various syndromes may alternate with each other.

In reviewing this veritable, medley of disorders, the conclusion seems inevitable, viz., that they are the outcome of an inborn predisposition—a diathesis of, I believe, a neuroendocrinopathic kind. Endeavoring to find some common etiological bond for these divers syndromes, I some time since suggested that the live link in rheumatic as in asthmatic heredity was the transmission of a tendency to protein sensitization. For recalling the resemblance obtaining between the phenomena of serum sickness and rheumatic fever such an hypothesis might explain the otherwise inexplicable interplay of the articular and abarticular manifestations of the latter disorder. But even so, through what medium is the hereditary transference of a tendency to protein sensitization secured? Does it constitute another phase of endocrine or glandular heredity?—(*N. Y. Med Jour.*, May 20, 1925.)

Arthritis

N. Muten of London is of the opinion that the condition of the alimentary tract dominates the outlook in rheumatoid and osteoarthritis. His general scheme of treatment is: The entire alimentary tract was surveyed carefully in each case and an estimate formed of the relative degrees of septic absorption occurring at the various levels. The more accessible areas of infection in the jaws, throat, and intestines were treated surgically and all the disorders of the digestive tract which had encouraged the development of chronic infection were dealt with. Autogenous vaccines proved of great value when used to supplement these measures. They were prepared from infective bacteria of all the principal zones of sepsis.

Streptococci obtained from different foci in the same patient usually vary in their cultural characters, and each strain was included in the vaccine. Chronic infection frequently damages the thyroid gland. In the present series minor forms of subthyroidism were common, while well defined myxedema or goitres of considerable size were seen in fourteen per cent. of cases.

There is intimate association between immunity reactions and the functions of the thyroid gland. The dry extract of the thyroid was given in all such cases with great benefit to the joints. Accurate diagnosis aided by radiograph and bacteriology, makes radical treatment and cure possible. In the series reported which were followed for varying periods up to nine years, eighty-nine per cent. showed great improvement or complete arrest. Of the failures one quarter had received very partial treatment only and could not be inoculated with vaccines. If it were possible to exclude those cases in which circumstances such as age, temperament and position in life prevented the full use of radical methods the results would have been still more encouraging.—(*N. Y. Med. Jour.*, May 20, 1923.)

Hemoclastic Crisis Test in Pregnancy

From the evidence presented by Widal and other workers, Reveno and Welz of Detroit conclude that the normal response to the hemoclastic crisis test is one of leucocytosis, while in the presence of hepatic derangement the response is characterized by a leucopenia. In pregnancy, where the load on all the important organs of the body is increased, one would expect, even in the apparently healthy woman, at least some slight evidence of hepatic derangement.

This is not substantiated by the results obtained from this investigation for out of thirty-nine healthy pregnant women subjected to this test, only three or 7.7 per cent showed a positive reaction; twelve, or 30.7 per cent, showed an alimentary leucocytosis, while the remainder showed a reaction which could not be interpreted. Of passing interest is the occurrence of a hemoclastic crisis in two of the patients who were undergoing intensive luetic treatment at the time the test was performed. This, however, happened to be the only evidence of liver derangement (if any were present at all) that these patients presented.

While the number of cases under consideration here has not been large enough to permit one to decide definitely for or against the value of the test in pregnancy, it is believed that the evidence procured in this series does not warrant the routine use of the hemoclastic test of Widal as a test for liver function in pregnancy.—(*Am. Jour. Obst. & Gyn.*, April, 1925.)

Silver Nitrate in Eczema

Veyrières recommends, in the treatment of eczema, painting every four or five days with a 3 per cent. solution of silver nitrate. In the interval the affected part should be powdered with an inert powder. Silver nitrate should never be employed during an acute attack of eczema.—(*Journ. des Practiciens.*)

(*Continued on page* 259)

The Medical Times

A MONTHLY JOURNAL
OF
Medicine, Surgery and the Collateral Sciences
ESTABLISHED IN 1872

EDITED BY
H. SHERIDAN BAKETEL, A.M., M.D., F.A.C.P.
ARTHUR C. JACOBSON, M.D.
Associate Editor

Contributions.—EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this publication.

When authors furnish drawings or photographs, the publishers will have half tones and line cuts made without expense to the writers.

SUBSCRIPTION RATES
(STRICTLY IN ADVANCE)

UNITED STATES (Including Alaska, Cuba, Mexico, Porto Rico, Hawaiian and Philippine Islands)	$2.00 per year
CANADA	$2.25 per year
FOREIGN COUNTRIES IN POSTAL UNION	$2.50 per year

SINGLE COPIES, 25 CENTS

Definite written orders for THE MEDICAL TIMES are required from all subscribers, to whom the journal is thereafter regularly forwarded.

Notify publisher promptly of change of address or if paper is not received regularly.

Remittances for subscriptions will not be acknowledged, but dating on the wrapper will be changed on the first issue possible after receipt of same.

All communications should be addressed to and all checks made payable to the publishers.

MEDICAL TIMES CO.
ROMAINE PIERSON, *President*
H. SHERIDAN BAKETEL, *Treasurer*
GEORGE B. CREVELING, *Secretary*

95 Nassau Street - - - New York

NEW YORK, OCTOBER, 1925

Jonathan Edwards, Vicarious Sadist

The fallacies and sophistries of eugenics are strikingly revealed by a careful scrutiny of the Edwards stock antecedent to the famous Jonathan. This family has always been "starred" by the eugenists as the best example of what good ancestry will effect.

It is our task to prick this sacred bubble.

The grandmother of Jonathan Edwards was divorced from her husband for adultery and other immoralities, and her sister and her brother were murderers. Edwards' grandfather had six children by a subsequent marriage, none of whom, nor any of their descendants, were above mediocrity. Presumably, it was before the eugenists had any knowledge of this, the most startling chapter in the annals of family-closet skeletons, that they created their rickety legend of the absolute soundness of the Edwards stock, if indeed they know anything about it yet.

Jonathan Edwards was the grandson of Richard Edwards, a merchant of Hartford, Connecticut, and of his erratic wife Elizabeth Tuthill (or Tuttle). By this first wife Richard had six children whom he recognized as his own. The first child born to her after their marriage he did not recognize as his own, and he was fined for fornication on account of this daughter by the Colonial Court. From the subsequent conduct of the mother, it is reasonable to infer that he was ignorant of her condition when he married her, and of her high-powered erotic equipment.

"There can be no question," says Stoughton, "that this branch of the Tuttle family, from which Jonathan Edwards' grandmother came, as erratic to the degree of insanity. Mrs. Richard Edwards' brother was found by the Colonial Court guilty of murdering a sister, and another sister found guilty of killing her son. Both of these persons would undoubtedly have been pronounced insane by a committee *'de lunatico inquirendo'*,—but the plea of insanity was little favored by the early courts, and indeed in his case was not urged. The brother was executed, but the sister, through the confusion arising at the time in the administration of Colonial affairs, escaped the penalty of the law, there being in point of fact no government that could lawfully execute her, owing to trouble growing out of Sir Edwin Andross' administration."

The mother of Elizabeth Tuttle was extremely erratic, judged either by the standards of her day or our own. She "led her husband an unquiet life." Two of Elizabeth's sisters became confirmed opium eaters. "In this connection," Stoughton continues, "it is easy to see that some of the peculiarities of the Tuttle blood, which were transmited through the union of Richard Edwards and Elizabeth Tuttle to the Edwards line, crop out here with all the force of unimpaired vitality. Writers who have speculated much on the strange and curious outbreaks of depravity in certain members of the Edwards race, but which were restrained by the strong will of President Edwards, to renew their fierce activity in his son Pierrepont and grandson Aaron Burr, can find ample explanation of their origin upon physiological grounds, if they will study the history of that branch of the Tuttle family.

'Great wits are sure to madness near allied,
And thin partitions do their bounds divide.'"

Even the pious Jonathan must at times have had his eugenic doubts, like Ezekias Painter in the *New Spoon River*:

"Considering your heredity, O my Saviour,
And that your ancestor Roboam was a bad man,
And begat Abia, a bad son;
And that the said Abia, a bad father,
Begat Asa, a good son;
And that Asa, a good father,
Begat Josophat, a good son;
And that Josophat begat Joram,
Of whom nothing is known;
Who in turn begat Ozias, of whom nothing is known;
And on down, until your father Joseph was born,
Of whom nothing is known,
Except that it took an angel from heaven
To keep him from divorcing your mother Mary—
Seeing all this, and that my father was a drunkard,
And I a leader in the church, a man of substance,
I must conclude from your case and my own
That neither piety nor impiety
Is hereditary—
Which makes me fear for my son!"

The atrocious murders we have cited, a brother butchering a sister, and a sister destroying a son, strongly suggest sexual complexes. The versatile sexual vigor of Grandmother Tuttle astounded and shocked the New England Puritans by whom this small-town Messalina was surrounded and judged. What was behind the terrific fantasies of Jonathan Edwards himself concerning the brutal torturings in hell of those pictured by him as sinners?

These sinners were "vile insects," "filthy worms," "firebrands of hell." "As innocent as children seem to be to us, yet, if they are out of Christ, they are not so in God's sight, but are young vipers and are infinitely more hateful than vipers."

One of his biographers admits that the letting loose of Edwards upon other men in their ordinary condition resulted in the saddest consequences. "He was like some organ of vast capacity whose strongest stops should never have been drawn." The immediate effects were

indescribable—incredible, were not the testimony so abundant and unimpeachable. He played upon the emotions of his victims until they made outcries "as of animals in pain." The alarm, distress and confusion were so great on these occasions as to arouse pity, and the noise itself would enjoin upon Edwards: "Peace, be still!"

He achieved his most lurid effects when he preached Calvinism at its boldest. *Sinners in the Hands of an Angry God* got a terrifying warning:

"The wrath of God burns against them; their damnation does not slumber; the pit is prepared; the fire is made ready; the furnace is now hot, ready to receive them; the flames do now rage and glow. The devils watch them; they are ever by them, at their right hand; they stand waiting for them, like greedy, hungry lions that see their prey, and expect to have it, but are for the present kept back; if God should withdraw His hand, by which they are restrained, they would in one moment fly upon their poor souls. The old serpent is gaping for them; hell opens its mouth wide to receive them; and if God should permit it, they would be hastily swallowed up and lost.

"The God that holds you over the pit of hell, much as one holds a spider or some loathsome insect over the fire abhors you, and is dreadfully provoked: His wrath towards you burns like fire; He looks upon you as worthy of nothing else, but to be cast into the fire; He is of purer eyes than to bear to have you in His sight; you are ten times so abominable in His eyes, as the most hateful and venomous serpent is in ours.

"If we knew that there was one person, and but one, in the whole congregation, that was to be the subject of this misery, what an awful thing it would be to think of! If we knew who it was, what an awful sight would it be to see such a person! How might all the rest of the congregation lift up a lamentable and bitter cry over him! But alas! instead of one, how many is it likely will remember this discourse in hell! And it would be a wonder, if some that are now present should not be in hell in a very short time, before this year is out. And it would be no wonder if some persons that now sit here in some seats of this meeting-house in health, and quiet, and secure, should be there before to-morrow morning. Those of you that finally continue in a natural condition, that shall keep out of hell longest, will be there in a little time! . . . How can you rest for a moment in such a condition? . . . Let every one that is out of Christ now awake and fly from the wrath to come. . . . Haste and escape for your lives, look not behind you, escape to the mountains, lest ye be consumed."

It is to the credit of the wretches exploited so viciously by this evangelistic Titan that they finally revolted against his attempted dictatorship (along incredibly narrow lines) and ejected him from their midst. Their emotional debauchery bore logical fruitage at last, and the tyrant was chased from Northampton.

The diagnosis, of course, is vicarious sadism. He who would otherwise have been a monster of sexual depravity gratified his ferocious lusts by sublimating his suppressed libido along lines that have been clearly indicated. His preaching orgies were substituted for sexual ones. His hellish imagery, preached with ecstatic fervor and frightful vehemence, released and put into action the tremendous sexual potentialities of the man which had been inherited in full store from the tribe of satyrs and Jukeses (or worse than Jukeses) who graced his family tree. But the harm done by the aristocracy of crime which produced Edwards pales into insignificance when compared with his "spiritual" depredations upon the race. The earlier band of degenerates were heavenly angels, in their obscure spheres, relatively speaking. The brilliant Edwards disdained to ravish the bodies of his kind. He tore their quivering souls to pieces with an obscene, frantic and gory ritual that today stands revealed in all its horrible putridity, with all the intolerable stench of its altar incense in the nostrils of civilized men.

If there is no hell, surely one should be invented over which the shade of Edwards could fitly preside, supplanting the inefficient loafer of conventional tradition.

[Sources: *Col. Records of Conn.*, iv., p. 59; Stoughton's *Windsor Farmes*, pp. 39, 69.]

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

"Spontaneous Combustion"

John Allen Krout, of Columbia University, gives an amusing account in his recently published work, "The "Origins of Prohibition," of the theory of "spontaneous combuston" as it was accepted by the temperance reformers of 1827 and the decades immediately following.

The idea that a drunkard might die suddenly because of rapid oxidation seems to have emanated from Charles Dickens *(Bleak House)*. It was definitely rated as one of the modes of death to which a drunkard was liable by Jonathan Kittredge, one of the leading propagandists of the time. He reported a death in which the fatal outcome was due to careless contact wth a lighted candle and alluded to ten other cases occurring in the experience of one Trotter. All these cases were declared by Kittredge to have been adequately authenticated.

Thereafter, the literature of the temperance movement contained frequent references to this mode of death as an accepted fact. It is true that some of the medical publications of the day adopted an attitude toward the theory that was not exactly hostile. A Dr. Peter Scofield, of Johnstown, Upper Canada, reported the case of a man roasted from head to foot because of the combustion of ardent spirits, while Dr. J. C. Hanson of South Berwick, Maine, on bleeding a common drunkard, reported that he had applied a match to the blood with the result that it burned for thirty seconds with a blue flame.

Dr. Eliphalet Nott, President of Union College, was at first sceptical about the combustion theory, but in a lecture to the student body in 1838 he conceded his conversion. The cases of the death of drunkards by "internal fires, kindled often spontaneously in the fumes of alcohol, that escape through the pores of the skin," had become "so numerous and so intcontrovertible" that he presumed no informed person could be found to call the reality of their occurrence in question.

In the foregoing address Dr. Nott cited a score of indubitable instances, which in their totality had convinced him completely. In every case the victim had been long addicted to the use of ardent spirits and wine. Ignition of the alcoholc fumes was traceable in most of the cases to a lamp, pipe or stove, but several exceptions proved that combustion might take place without the presence of an external agent.

The author of the book from which we have taken these extracts remarks that "Their will to believe so far transcended the reasonable objections to this theory that the temperance forces presented it in pamphlet and periodical as the extreme penalty which the intemperate might be called upon to pay." He adds: "What mattered it that none of them had ever witnessed a case in point?"

The psychology of the prohibitionist appears not to have changed at all. He believed that the spontaneous combustion theory was sound simply because he wanted to believe it; it ought to be true, even if it was not. To-day he believes that prohibition can be enforced simply because he wants to believe it; it ought to be enforceable, even if it is not.

It is of interest to note that this spontaneous combustion preachment had no effect upon the habitués, just as "enforcement" is having no effect upon them to-day.

Anatony of the Pelvic Bowel

(Concluded from page 243)

rises slightly as it passes about one inch to the right of the median line, where it turns sharply downward and inward to reach the median line again in front of the third sacral vertebra.

Beginning at the iliac crest, the sigmoid generally arches upward and to the right across the abdomen to the right iliac fossa, where it forms one or two coils and then passes down in the right pelvis into the pelvic cavity, toward the middle of the sacrum, where it joins the rectum, thus making an S-shaped curve within the pelvis. When it is short, as not infrequently occurs, all its curves are abridged and it runs more or less directly backward after entering the pelvis. The position of the sigmoid also varies with the fullness or distention of the bowel itself, and is also displaced by the variations of size and position of the bladder and uterus. Active peristalsis may also alter its position. When empty it lies in the pelvis, and in woman rests upon and behind the uterus, and upon the bladder in the male. When distended, it rises into the abdomen even to the umbilicus. The pelvic mesocolon is fan-shaped, short at either extremity and long in its middle portion. When the sigmoid rises into the abdominal cavity, this mesentery is doubled upon itself. This is of special interest, from the standpont of applied anatomy, as the long mesosigmoid permits of great mobility of the pelvic colon, and hence renders this portion of the bowel more liable to volvulus.

Some individuals subject to habitual constipation have an elongated and attenuated mesosigmoid. The bowel loaded with feces may fall over an adjoining loop and become twisted. The hypertrophied or impacted sigmoid may also be responsible for introversion or subinvolution of the uterus, leucorrhea and many other troubles to which women are subject and for prostatic and bladder troubles in men. Such conditions are all too frequently overlooked and account for many failures to get results in the treatment of the conditions named when more intelligent efforts might have been crowned with success.

At birth only the terminal part of the pelvic colon lies in the pelvis, chiefly because of the small size of the infant's pelvic cavity. When, to remedy an imperforate anus, it is necessary to form an artificial anus, it is important to remember that although the iliac colon is in the left iliac region, the sigmoid usually lies on the right side. The sigmoid joins the rectum at an angle which may be sharp or obtuse and there is no way to determine this angle except by inspection.

The Intersigmoid Fossas: As the sigmoid is lifted up, and the left mesosigmoid exposed, there will be seen a funnel-shaped recess of the peritoneum, lying on the external iliac vessels, between the psoas and ilias muscles. This is the orifice leading to the intersigmoid fossa, which lies behind the sigmoid mesocolon and in front of the perietal peritoneum. The fossa varies in size from a mere dimple to a pocket which will admit the whole index finger.

These fossae are found in the majority of cadavers examined, although in varying frequency according to different observers (Moynihan found it in 70 per cent). In infants it is almost always present, but in later years it becomes less constant. Adhesions and thickenings of the mesocolon obliterate the cavity. The opening of the pouch is in the line of attachment of the sigmoid mesocolon, near the inner margin of the psoas magnus. Its orifice is round or oval, with a well defined sharp edge of peritoneum, without any evident blood vessels. The intersigmoid fossa lies behind the sigmoid mesocolon and in front of the parietal peritoneum. It results from imperfect blending or physiological adhesion taking place between the left (posterior) layer of the mesocolon and the parietal peritoneum, hernia into the intersigmoid fossa may occur. Eve *British Medical Journal*, June 13, 1885, p. 276) records a case of strangulated hernia into the fossa, and McAdams Eccles (St. Bartholomew's Hospital *Reports*, XXXI, p. 177) also reports a case. Hernia into the intersigmoid fossa may occur in a normal abdomen, without previous peritonitis or abnormality of size or position of the sigmoid flexure or any part of the intestine, or it may occur where gross congenital abnormality has been a factor.

Diagnosis and Treatment

(Concluded from page 256)

Tuberculous Cystitis

Henry J. Farbach, of Louisville, observes that the clinical picture of tuberculous cystitis is one of frequency of urination; that frequency may be at intervals of fifteen minutes both day and night; varying from the other types of cystitis in which generally urinary frequency is less at night than during the day. In tuberculous cystitis urinary frequency is accompanied by considerable strangury and pain. Most often associated with painful urinary frequency, extending over a considerable period of time both day and night, is a history of hematuria which may occur at intervals or be continuous.

The period in life when tuberculous cystitis is most frequently seen is the age in which tuberculosis usually attacks the human body, i. e., between fifteen and thirty years. These patients sometimes appear to be in good general health, but most often they have lost much weight and are physically below par. They are generally very nervous and somewhat exhausted, due to loss of sleep as much as from their constitutional tubercular infection.

The diagnosis is made by finding tubercle bacilli in the urine. There are two methods of demonstrating tubercle bacilli in the urine, first, examination of the dried urinary sediment, and second, guinea pig inoculation. One of the features that attracts attention microscopically is the large amount of pus and blood in the urine, and in most cases, excepting in the later stages of the disease, there are very few bacteria of the coccal or bacillary type found in connection with the pus and blood. These patients have a very small vesical capacity, as a rule two ounces represents about the limit, and this restricted capacity exists even under general anesthesia when cystoscopy is attempted. The clinical diagnosis is supplemented by cystoscopic examination.

A diagnostic feature is that, in vesicular tuberculosis, any attempt to introduce the cystoscope is very painful. Sacral anesthesia is probably the best type to use in making cystoscopic examination of the tuberculous bladder. It is even better than general anesthesia. Every urologist has attempted cystoscopy under local anesthesia and has found it unsatisfactory. In a small percentage of cases, however, it may be found the best method to use. Most of us who have performed cystoscopy under general anesthesia have found the picture obtained is really no better than that secured under local anesthesia; moreover, the tuberculous bladder will not distend much better under general than local anesthesia. These patients, even when under general anesthesia, continue to strain spasmodically and urine is voided around the cystoscope making the result of the examination practically *nil*. Sacral anesthesia, by blocking the nerves going to that part of the bladder, gives one a better opportunity to obtain a distinct view of existing tuberculous lesions than can be had under general anesthesia. Tuberculous lesions appear "punched out" and present a rather bright red angry appearance, and even under sacral anesthesia if one of the lesions is touched by the urethral catheter it is immediately followed by vesical spasm showing that the lesion is extremely sensitive.

General physical examination usually reveals tuberculous lesions in the chest or lymphatic glands, but most often in the chest. The majority of the patients give a history of having had vesical disturbances for six months or more, sometimes two or three years. Many of them have been treated for various conditions.

As to the surgical aspects of vesical tuberculosis: Many of our best urologists advise double catheterization in these cases, using the pyelogram and roentgen-ray to determine the extent of renal damage, and then removing the kidney showing the

greatest involvement. That is their advice. It is based on the fact that a great many of these patients experience considerable relief for a short time after such an operation. In the author's experience, such a procedure is rarely justified. He has under observation several patients who have had one kidney removed for tuberculosis, and a few months after the operation the remaining kidney showed lesions just as extensive as the one that was removed. There was perhaps a few months in which they enjoyed some relief from symptoms after the operation, but not sufficient to justify the amount of shock incident to nephrectomy, reduction in renal excretion and consequent limitation of urinary output.

Farbach has followed some of these cases to the necropsy table, and it is remarkable to see in some instances how little excreting kidney substance is left after renal tuberculosis, still during life the patient may have exhibited no symptoms of kidney insufficiency. One case comes to mind in which one kidney had been removed eight years previously. The individual had been a patient four years before he died. Autopsy disclosed a minimal amount of excreting renal tissue, and that was scattered about in hardened areas, cavities filled with cheesy material, pus, etc.; but this small amount of functionating renal tissue was doing the work and the patient showed little evidence of lack of elimination. In all the cases that have come under my observation Farbach has never found one in which tuberculosis was confined to one kidney alone. In one case the first two examinations indicated that tuberculosis involved only one kidney, but subsequent cystoscopy disclosed that both kidneys were affected.

As to the duration of the disease if not treated surgically: One patient under observation with bilateral renal tuberculosis is living at the end of twelve years. Another patient (a female) is living at the end of ten years. The patient in whom the disease has persisted for twelve years was treated by several urologists of Louisville for cystitis thought to be of gonorrheal or syphilitic origin. He is a married man and has never had either disease. Twelve years ago Farbach made the diagnosis of bilateral renal tuberculosis accompanied by tuberculous cystitis. Six years later he developed an abscess of the right femur; a prominent surgeon of Louisville exposed the affected area and secured proper drainage; the wound never healed and is still discharging.

As to the woman who is living with tuberculous cystitis of ten years duration: Her bladder has been opened on three different occasions. After opening the bladder local applications were made with twenty per cent argyrol solution and the vesical wound satured. This woman has periods of perhaps two or three months when she enjoys comparative freedom from urinary symptoms; that is, she will not have to urinate oftener than every one and a half hours. The symptoms then become aggravated and urination will be necessary every fifteen minutes both day and night.

In several of these cases the Bomine method of tuberculin injections has been used. He takes the attitude that at present we must consider the tubercular toxin as a special toxic substance, that it produces no unusual reaction but it must be considered a poison, just as we figure arsenic or strychnine as poison. He begins with infinitesimal doses, takes the patient's temperature and pulse rate twice daily, repeating the dose twice each week, increasing the dosage at the end of the fourth day interval or the third day interval as required. Any time there is a rise in temperature or pulse rate, it is the signal that the patient has received the maximum dose in that interval of time. If there is associated with rise of temperature and pulse an increase in the patient's symptoms, it is a sign that treatment should be postponed for several weeks. This is a long, tedious method of treatment, but in the eight cases in which it has been tried better results have been secured than by any other procedure.

Local applications in tuberculous cystitis are practically useless in that they seem to aggravate more than relieve. If there is any one local application that seems to afford relief it is a preparation of the French oil of eucalyptus. The general constitutional treatment by means of opiates and tuberculin injections is the only method by which relief may be obtained in the majority of instances.

How long do patients live after the development of tuberculous cystitis? They may live a long time, often too long to suit the physician who has to treat them, and sometimes too long to suit the patients themselves. They are the most miserable people who visit the physician's office. They are incapacitated on account of the urinary frequency and are able to get little rest day or night, and the physician is "at the end of his string" in trying to advise them what to do.

There have been two strictly surgical procedures suggested for the treatment of these unfortunate cases, but "follow-up" reports on both show that they have not been entirely satisfactory. One is to bring the ureters through the lumbar muscle, arranging some kind of a receptacle for collecting the urine, and dilating the exposed ureters once or twice weekly with ureteral catheter. This seems to give a great deal of relief for a few weeks, but in a comparatively short time secondary infection supervenes and the patient succumbs from that cause.

The other suggestion is implantation of the ureters into the sigmoid or rectum. This is generally followed in a comparatively short time by tuberculous ulcers of the intestinal muscosa which are accompanied by a distressing train of symptoms, and in addition the urinary symptoms will in many instances persist unless steps are taken to prevent them.—(*Urol. & Cut. Rev.*, June, 1925.)

Dangers of Tetra-ethyl Lead in Motor Spirit

J. H. Shrader, of the Baltimore Health Department, has made a study of the poisonous properties of this product that recently has been introduced to the gasoline dispensing trade. He says, of course, that in itself ethyl lead is highly poisonous, but as used in practice its dangers are practically nil. To the trade it is sold in a diluted form in containers and when this is added in the proper proportion of gasoline, as sold at the stations, it is so further diluted that the user of a motor car is quite unlikely to incur any added danger in the use of gasoline so treated. Animal experiments carefully carried out, showed that the exhaust gases from "doped" gasoline were no more harmful than those from ordinary gasoline, and more particularly, none of the animals showed any symptom of lead poisoning. The question of persons on the street running any special hazard to health from inhaling exhaust fumes of "lead gas" is devoid of such possibility. In the article it is pointed out that already over two hundred million gallons of "lead gas" have been handled and dispensed since its introduction two years ago, without any injjury or loss of life resulting.—(*Am. Jour. Pub. Health*, p. 213, 1925.)

Treatment of Acute Rheumatism with Salicylates

In discussing the treatment of acute rheumatism with salicylates it is pointed out that the method most favored in France has been to give salicylate of soda along with bicarbonate of soda to the patient, on a milk diet. The salicylate is given in considerable dilution: each day the dose of salicylate of soda is dissolved with double that quantity of bicarbonate of soda in a litre (℥ xvi.) of water, and about 100 grams (℥ iv.) of this given every two hours.

Danielopolu, of Bucharest, while following this method of administering the salicylate, gradually increases the amount up to very large doses, with apparently good results. In an attack of acute rheumatism of moderate intensity he begins by giving 8 grams (℥ ii.) of salicylate of soda, along with 16 grams (℥ iv.) of bicarbonate of soda, in the twenty-four hours. He increases the dose of the salicylate by 2 grams (℥ ss.) and of the bicarbonate by 4 grams (℥ i.) every third day up to the thirteenth day of the illness; he continues to give 16 grams (℥ iv.) of the salicylate and 32 grams (℥ i.) of the bicarbonate in the twenty-four hours, up to the twentieth day, when he begins similarly to decrease the doses by 2 grams (℥ ss.) and 4 grams (℥ i.) respectively.

In the more intense forms of rheumatic fever he gives even larger doses of the salicylate and bicarbonate, up to 20 grams (℥ v.) and 40 grams (℥ x.) respectively, in twenty-four hours. He also prefers a farinaceous diet to a fluid diet, but this is not supported by other authorities.—(*Journ. des Practiciens*, May 3, 1924.)

Treatment of Pellagra

In the treatment of three hundred cases of pellagra, B. W. Page, of Waysville, N. C., has found ichthyol and copper arsenite of greatest importance. Ichthyol in four to six gram doses, in pills or peppermint water, three or four times a day, is most valuable in the early weeks of the disease. It relieves the nervousness, prevents and cures the eruption, regulates the digestion and controls the disease.

In old cases, with a history of months' or years' standing, copper arsenite, grain 1/100 three or four times a day, offers an additional adjunct and in many instances an improvement over ichthyol when given simultaneously. Considering the theory of intestinal antiseptics, the author has used such combinations as:

R/—Bismuth subgallate	2	grs.
Zinc sulphocarbolate	½	gr.
Beta naphthol	½	gr.
Copper arsenite	1/200	gr.
Ichthyol	2	grs.

to better advantage than either of the two drugs alone.

A symptomatic and supportive treatment become necessary in many cases. Sodium cacodylate once or twice a week for anemia Strychnine and sometimes digitalis is indicated. A nutritious diet is necessary—one that the patient can consume.

The prophylactic treatment is similar to that of measles and typhoid fever. However, we believe the susceptibility is much less, probably comparable with that of tuberculosis. Sewer systems, ventilation and, in the first stages of the disease, isolation should be instituted.—(*Clin. Med.*, June, 1923.)

Some Mistakes in the Diagnosis of Pulmonary Tuberculosis

The observations given herewith were based on cases seen at at the Cook County Hospital, Mt. Sinai Hospital and various Dispensaries of the Municipal Tuberculosis Sanitarium in Chicago. Many cases were diagnosed as tuberculosis as part of antituberculous campaign to diagnose this disease early. Symptoms of many other diseases simulate tuberculosis. Practically every variety of medical and surgical disease is sent annually to Cook County Hospital and to the tuberculosis dispensary diagnosed as tuberculosis. All tuberculosis sanitaria have cases of non-tuberculous diseases.

1. Diseases having symptoms similar to tuberculosis—

(a) Hyperthyroidism—diagnosed by constant tachycardia and elevated basal metabolic rate.

(b) Mitral stenosis—diagnosed by characteristic physical signs of enlarged heart, presystolic murmur and thrill and frequent auricular fibrillation.

(c) Subacute infective endocarditis. Normal or slightly elevated temperature, enlarged spleen, clubbed fingers, painful nodules on toes, petechiæ and finding of streptococcus viridans in blood culture.

2. Diseases having pulmonary findings similar to tuberculosis—

(a) Basal pulmonary lesion, following influenzal infection. Dullness, bronchial breathing and râles in lower portions of lung, while apices are clear.

(b) Chronic bronchitis and asthma. No focal lesions but evidence of emphysema and diffuse sonorous râles.

(c) Non-tuberculous chronic infections of lungs.

(1) Syphilis—Diagnosed by positive history, positive Wassermann and favorable response to antiluetic treatment.

(2) Actinomycosis—Diagnosed by exposure to cattle and finding of ray fungus in sputum.

(3) Blastomycosis—Diagnosed by associated skin lesions and findings of yeast fungus in fresh sputum.

(4) Streptothricosis—Recognized by finding various forms of streptothrix in sputum while negative for tubercule bacilli.

(d) Neoplasm of the lungs.

Benign or malignant. Diagnosed by physical signs of flatness, suppressed breath sounds and absence of signs of moisture, which are usually found in tuberculosis.

(e) Foreign bodies in the lungs.

Diagnosed by history and x-ray findings of either foreign body or zone of localized emphysema, which is very suggestive.

(f) Pulmonary abscess-infarct-gangrene.

Diagnosed by characteristic odor, purulent sputum and finding of area of dullness, bronchial breathing and râles at base.

(g) Upper respiratory infection.

Especially common in children with tonsil, adenoid and sinus disease. Low grade temperature, general malaise and findings of apical collapse.

(h) Non-tuberculous pathology in apex—collapse or induration of apex, giving rise to dullness on percussion. Frequently found during routine examination in people having no other evidence of tuberculosis. Negative sputum by repeated examinations is an important feature of all the above conditions.

Cases of Tuberculosis Usually Undiagnosed

Important in prophylaxis at extremes of age—

1. Infants.

General death statistics show about 50 per cent of all deaths below one year are due to tuberculosis. Pathogenesis. Occurs as an acutely fatal general infection in infants due to lack of immunity.

2. Tuberculosis in the aged.

A slightly active fibrous disease usually masquerading as chronic bronchitis and emphysema. An important factor in the spread of tuberculosis—by carelessness with sputum and fondling of infants.

Prevention of Errors

1. Analysis of symptoms and findings without prejudice. Most tuberculosis workers and institutions regard a case as tuberculosis until proved otherwise.

2. A broader knowledge of general medicine—to be familiar with diseases other than tuberculosis, giving rise to similar symptoms and findings.

3. Physical signs—begin nearly always in the apex.

4. Sputum analysis. Antiformin method on 24 hour sputum. Repeated examination in marked cases with negative sputum rules out tuberculosis.

5. Careful interpretation of results of tuberculin test. Positive tuberculin test without clinical evidence indicates tuberculous *infection* only, not tuberculous disease.

6. Careful interpretation of results of x-ray examination. X-ray findings without clinical signs should never justify a diagnosis of active pulmonary tuberculosis.

7. Establish a group of suspected tuberculosis cases and keep them under constant observation without stigmatizing them as tuberculous until sputum is positive or other positive evidences appear.

Conclusion

1. Great care should be exercised in the diagnosis or exclusion of tuberculosis, as errors in diagnosing nontuberculosis, as errors in diagnosing nontuberculous cases will not only unjustly stigmatize these cases as tuberculous, but also deny them proper treatment for their disease. Correct diagnosis will also relieve them from the tuberculosis restrictions of the Health Department unnecessary for them.

2. Failing to diagnose tuberculosis by careful sputum analysis is a cause of infection, especially among infants where it is usually fatal.—(*Bull. City of Chicago Municipal Tuberculosis Sanitarium.*)

Inability to Swallow

Sometimes a child complains that he is unable to swallow certain foods, usually meat—"it won't go down." The child may suffer real distress and exhaust his inventive faculties in finding excuses for leaving the table to rid himself of the obstinate mouthful unobserved. The condition is hysterical, and is very liable to spread to other young members of the family.

Quiet acceptance of the disability by his elders and the temporary withdrawal of the offending article of diet will save the child from much harmful distress, and the difficulty will quickly disappear. As in food-refusal, wholesome neglect is far more effective than any drug.—(*Practitioner.*)

Uniform Notation for Wassermann

Consideration has been given to the report of the Health Committee of the League of Nations on the international comparison of serum tests of Syphilis and their recommendation that, for purposes of comparison, a uniform system of notation should be employed by all laboratories in rendering reports on serum tests for Syphilis. The notation recommended is as follows:

++=a strongly positive Wassermann reaction, or a Sigma test giving more than 3-9 units in 20 hours.

+=a positive Wassermann reaction with fixation of the standard amount of complement, or Sigma test giving 1.5 to 3.9 units in 20 hours.

±=a doubtful Wassermann reaction, with some hæmolysis in the standard tube, or a Sigma test giving 1.0 to 1.4 units in 20 hours.

−=a negative Wassermann reaction, or a Sigma test giving less than 1 unit in 20 hours.

Chronic Copper Poisoning

F. B. Mallory investigated, post mortem, nineteen cases of hemochromatosis and has concluded that copper absorption, due either to industrial hazards, to drinking of liquors distilled in contact with untinned copper worms, or from foods of an acid nature prepared in copper vessels, is responsible for the production of this peculiar disease. Confirmation of these observations was obtained in experimental work on sheep and rabbits which were fed over long periods with varying doses of either metallic copper dust or copper compounds. The lesions found in these experimental animals corresponded entirely to the lesions found in man in cases of hemochromatosis.—(*Amer. Jour. Path.*, 1925, 1, 117.)

Primary Syphilis of the Anorectal Region

Edward G. Martin and Herbert I. Kallet, Detroit, have been impressed with the large number of cases of primary syphilis involving the anorectal region. This is distinctly in contrast with the experience of other observers, who are inclined to regard this type of extragenital lesions as more or less a rarity, and who accord it little clinical importance. During the past year, from a group of 300 proctologic cases, there were twenty cases diagnosed positively as chancre, and five others that were probably positive. Dark field examination was positive in thirteen cases, negative in two and not made in ten.

The Wassermann reaction was noted in seventeen cases. It was positive in five cases and negative in twelve. In these cases, the chancre is accompanied early by a dermatitis and condyloma formation that distinctly modifies its appearance. The presence of a moist condyloma, especially in the young man, should suggest and be checked by dark field examination. Condyloma acumination—so-called—is not necessarily nonsyphilitic, and is often very infectious.—(*J. A. M. A.*)

Medical Happenings

American College of Radiology and Physiotherapy

The annual meeting of the American College of Radiology and Physiotherapy will be held in Hotel La Salle, Chicago, during the week of Oct. 19. The program will be:

MONDAY, OCTOBER 19

CLINICS

Wesley Hospital—
"Industrial Physiotherapy".....*Paul Maganson, M. D.*
Cook County Hospital—
"General Physiotherapy" .....*J. S. Coulter, M. D.*
"Electrocoagulation of Malignant Tumors",
Frank J. Novak, Jr., M. D.
"General Physiotherapy" .....*Disraeli Kobak, M. D.*
American Hospital—
"Cancer Clinic" .....*T. Howard Plank, M. D.*
Hollender and Cottle Clinic—"Physiotherapy in Eye, Ear, Nose and Throat Practice",
A. R. Hollender, M. D., and M. H. Cottle, M. D.

TUESDAY, OCTOBER 20

Registration
Business Session
Presidential Address—"The Past, the Present and the Future"
—*Curran Pope, M. D.*, Louisville, Ky.
"Status of Radiotherapy in Otolaryingology,"
Ira O. Denman, M. D., Toledo, Ohio, Otolaryngologist.
"Radium Therapy,"
C. W. Hanford, M. D., Chicago. Consulting Radium Therapist Cook County Hospital.
"Radiation Therapy,"
J. R. Ranson, M. D., Denver, Colo. Formerly Consulting Physician Colorado Radium Company.
"The Radiological Diagnosis of Early Pulmonary Tuberculosis,"
Roland G. Breuer, M. D., Norton, Kans. Assistant Physician Kansas State Sanatorium for Tuberculosis.
"Artificial Light Therapy in Tuberculosis,"
Edgar Mayer, M. D., Saranac Lake, N. Y. Physician Saranac Lake Sanatorium for Tuberculosis.
"Quartz Light Therapy in Otolaryngology,"
Ray A. Barlow, M. D., Madison, Wis. Otolaryngologist University of Wisconsin.
"Water as a Therapeutic Agent,"
Charles E. Stewart, M. D., Battle Creek, Mich. Physiotherapist Battle Creek Sanitarium.
"Therapeutic Exercise—A Neglected Method in Physiotherapy,"
J. C. Elsom, Madison, Wis. Physiotherapist University of Wisconsin.

TUESDAY, OCTOBER 20

EVENING SESSION

Subject to be Announced,
W. T. Bovie, Ph. D., Professor of Biophysics Harvard Medical School.
Fellowship Gathering and Smoker.

WEDNESDAY, OCTOBER 21

"Diathermy in Gonorrheal Diseases of the Male,"
Damon Brown, M. D., Madison, Wis.
"Diathermy in Gynecology and Genito-Urinary Practice,"
B. H. Hager, M. D., Madison, Wis. Urologist, University of Wisconsin.
"Diathermy on Medical Kidney Disease,"
Gustave Kolischer, M. D., Chicago. Associate Professor Genito-Urinary Diseases. Post Graduate Medical School.
"Bladder Tumors as Treated by Thermo-Electric Coagulation,"
B. C. Corbus, M. D., Chicago. Inventor of Thermaphore for Treatment of Endocervicitis by Diathermy. Author of Book on this Method of Treatment.
"X-Ray Therapy Twenty Years ago,"
William Allen Pusey, M. D., Chicago. Past President American Medical Association. Professor of Dermatology, University of Illinois Medical School.
"Newer Methods in the Treatment of Defective Hearing,"
M. H. Cottle, M. D., Chicago.
"The Use of the High Frequency Currents from the Surgeon's Standpoint,"
A. David Willmoth, M. D., Louisville, Ky.
Annual College Dinner—Educational Program,
Wm. Allen Pusey, M. D., Past President American Medical Association.
Maurice Fishbein, M. D., Editor Journal American Medical Association.
D. J. Davis, M. D., Professor Pathology and Bacteriology, University of Illinois Medical College

THURSDAY, OCTOBER 22

"Diathermy in Infections,"
W. B. Chapman, M. D., Carthage, Mo. Vice-President American College Radiology and Physiotherapy.
"The Treatment of Non-Union or Delayed Union of Bone and Bursitis,"
F. B. Granger, M. D., Boston, Mass. Radiologist and Physiotherapist, Boston City Hospital.
"Observations on Physiotherapy Abroad,"
Disraeli Kobak, M. D., Chicago. Attending Physiotherapist Cook County Hospital.
"Electrothermic Methods in Surgery,"
Wm. L. Clark, M. D., and *H. H. Bass, M. D.*, Philadelphia, Pa. Dr. Clark is a pioneer in the use of electrocoagulation in surgery.
"Endocrines and Physiotherapy,"
Maxmilian Kern, M. D., Chicago. An internist of wide experience in endocrinology.

Many others whose subjects are now being arranged will appear on the program.

Correspondence

Telling the Patient

To the Editor of the MEDICAL TIMES:

I was almost dumb-founded by the statement in the September issue in the article by Dr. Coe that it was his painful duty to lie to the unhappy patient and to support her doctor.

If a doctor is grossly negligent in overlooking definite early signs of cancer in a fine healthy-looking woman it is absolutely not the duty of the consultant to lie to the patient to protect the doctor.

Fortunately for the public and the profession those dictums of the dark ages have been superseded by a higher standard of honesty in the rising generation in the profession. It is to be hoped that those of the layety who likewise may have stood agape at the expression of such an opinion from one of the "Old-timers" of the profession will realize that those days are "Gone forever," and that today the men of the profession of medicine whom the public can feel satisfied to look up to as honorable, do work first and above all things for the good of the patient.

C. DEEDERA, M.D.

Electrotherapy

(Concluded from page 241)

is already established and severe, the tremendous disturbance at night which many of these patients suffer is immediately explained.

These facts and all the other facts set forth in this brief contribution will demonstrate to the thoughtful conscientious electrotherapeutists the truth of the dictum on which the author has insisted for upwards of ten years before this Association, namely that a cystoscopic analysis of all these cases should be done before beginning treatment and should be repeated every two or three months during treatment and further should furnish the record of the final results of treatment. If what has been said in this contribution leads to the adoption of this normal and straightforward teaching of urologists then the meaning of this paper will have been accepted.

45 West 9th St.

Gutta Percha Implantation

(Concluded from page 247)

a stationary point, and fat implants may remain indefinitely serving the purpose for which they were intended.

If one desires to do over an operation in which an open incision is made and a mass implant placed in the tissues, one usually finds the patient objects to such procedure, but the implantation of fat, or cartilage or gutta through the cannula is so simple a procedure that patients seldom object to its repetition, at a later period.

32 No. State St.